

The Candy Manufacturer

A Technical and Commercial Magazine for Manufacturing Confectioners Exclusively
Published by THE CANDY MANUFACTURER PUBLISHING CO., Stock Exchange Bldg., Chicago

Vol. II

JULY, 1922

No. 6



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Pass The Candy Manufacturer around

After reading forward to:

Superintendent

Chemist

Purchasing Dept.

Sales Manager

Return to

Read wherever good candy is MADE



DELFT

The World's Best Food Gelatine

HAROLD A. SINCLAIR, 160 Broadway, NEW YORK

"Price is a relative term—Quality always a concrete fact"

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EVERYWHERE**

Points Now Acknowledged by Leading Consumers Who Analyze and KNOW Gelatine

1. Extraordinary Uniformity of Delft Gelatine

Goods standardized packed and sealed at the works, delivered to you in perfect condition in original sanitary barrels of special construction.

2. Highest Strength and Purity

Not only meets the requirements of State and National Pure Food Laws, but is even purer than any of them demand.

3. Absolute Freedom from Liquefying and Harmful Bacteria

No tariff changes will curtail supplies, nor affect present reasonable prices.

Harold A. Sinclair

Members: National Confectioners' Association, Midland Club, Chicago Association of Commerce.
Applicant for Membership in Audit Bureau of Circulation.

The Candy Manufacturer

Registered, U. S. Patent Office

"READ WHEREVER GOOD CANDY IS MADE"

*A Specialized Technical and Commercial Magazine for Confectionery
Superintendents, Purchasing Agents and Executives*

Contents Copyrighted 1922, Earl R. Allured

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Vol. II

JULY, 1922

No. 6

PURPOSE

The purpose of THE CANDY MANUFACTURER is to provide a medium of constructive service and communication between manufacturing confectioners exclusively, a high-class specialized business magazine devoted to the problems and interests incident to the manufacture of confections and the management of a candy factory.

POLICY

THE CANDY MANUFACTURER, being a highly specialized publication, is edited in the interest of the executive, the purchasing agent, the chemist and the superintendent exclusively, and provides a medium for the free and frank discussion of manufacturing policies and problems, methods and materials.

The same corresponding policy applies to the advertising pages which are available only for a message directed to manufacturing confectioners and relative to a reputable product or service applicable to a candy factory.

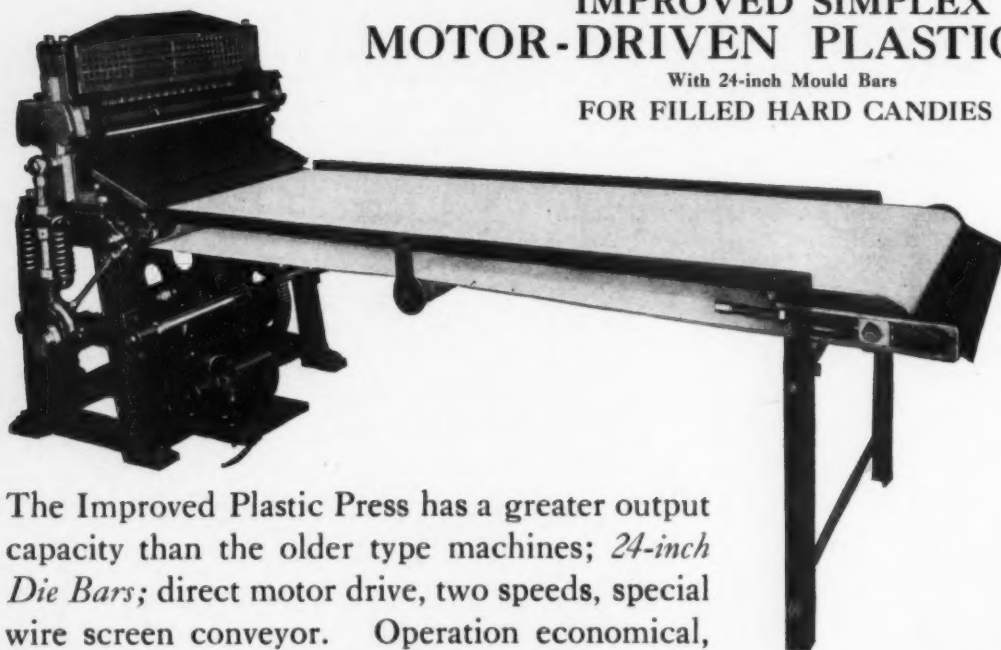
The Candy Manufacturer believes in

1. A Technical Candy School or Institute.
2. A Uniform Method of Standardized Cost.
3. Maximum Labor and Machine Efficiency for an Equitable Wage.
4. The endorsement and adoption of The National Standard Catalogue Size, Invoice Form and Coal Contract.
5. A National Council of Confectionery Superintendents representing local and territorial organizations.

DO NOT CONFUSE The Candy Manufacturer with other publications with similar names published in Chicago. Be sure of our street address, please: 30 North La Salle Street, Stock Exchange Bldg.

IMPROVED SIMPLEX MOTOR-DRIVEN PLASTIC PRESS

With 24-inch Mould Bars
FOR FILLED HARD CANDIES



Two Big
Money Makers

The Improved Plastic Press has a greater output capacity than the older type machines; *24-inch Die Bars*; direct motor drive, two speeds, special wire screen conveyor. Operation economical, simple and exceptionally accurate—every machine given a practical test before shipment.

Simplex Steam Vacuum Cooker

Cooks straight sugar perfectly, or any percentage of corn sugar.

Cooks scrap or any combination of ingredients.

Capacity, 5000 pounds daily, guaranteed

Built For Gas Also

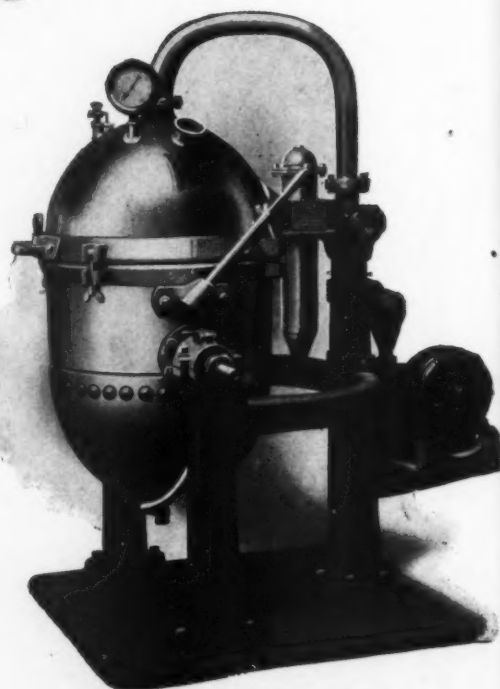
Capacity, 3400 pounds daily, guaranteed
(With extra melting kettle.)

400 in Use

Send for literature—No obligation

VACUUM CANDY MACHINERY COMPANY

JERSEY CITY, 74 Pearl Street



SIMPLEX STEAM VACUUM COOKER
(Process Pat. June 30, 1914)

The Improved Process for Making
Hard Candies

DRIER WHITER CLEARER

326 W. Madison Street, CHICAGO

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POLICY: THE CANDY MANUFACTURER is essentially a manufacturers' publication and therefore is a logical advertising medium only for confectioners' supplies and equipment. The advertising pages of THE CANDY MANUFACTURER are open only for messages regarding reputable products or propositions of which the manufacturers of confectionery and chocolate are logical buyers.

This policy **EXCLUDES** advertising directed to the distributors of confectionery, the soda fountain and ice cream trade. The advertisements in THE CANDY MANUFACTURER are presented herewith with our recommendation. The machinery equipment and supplies advertised in this magazine, to the best of our knowledge, possess merit worthy of your careful consideration.

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Von Dannenberg & Pick

82-92 Beaver St. 129 Pearl St.

NEW YORK CITY

BROKERS

In All Grades of

Cocoa Beans, Cocoa Butter
and Cocoa Products



Send for this literature—

It gives practical recipes which
have been tested and proven
by successful
confectioners.

It will help you
make the best
candy,—

So will

KOKOREKA

For Chocolate
Coatings and
Caramels

PLASTIKO

For Fillings

PARASUB

For Easter and
Penny Goods



Our practical demonstrators "Armitage" and "Hickey" are in the field constantly, working with the superintendents and practical men of the candy factories. This is part of our service. Can we be of service to you?

Write for free samples and booklet—"Science in Confectionery;" also for our new special literature "Uses and Abuses of Chocolate Coating," "How to Salt Peanuts" and "Popping Corn with Ko-Nut."

INDIA REFINING CO.

McKeen and Swanson Streets
PHILADELPHIA

Stocks Carried in All Principal Cities

Candy Flavors



SINCE there appears to be a growing disposition among all Manufacturers of Food Products, and especially Manufacturing Confectioners, to discontinue the use of the old-time Ethereal Flavors, it has been suggested to us that there might be a good demand for Flavors of the "MODERN TYPE," based upon the extractive matter of sound, ripe fruit, which are especially adapted for **HARD CANDIES** and will impart a satisfactory Flavor of **True Fruit Quality** to the finished product.

Our studies in this field, in the production of highly concentrated fruit extractions, fit us particularly for this kind of work, and after extensive experiments in our Laboratories we are now in a position to offer the following **Flavor Group**:

Hard Candy Flavors

APPLE	HONEY
BANANA	LOGANBERRY
BLACKBERRY	PEACH
CHERRY (with Pit Flavor)	PEAR
CHERRY (without Pit Flavor)	PINEAPPLE
CHERRY, Wild	RASPBERRY
CURRENT, Black	ROSE
CURRENT, Red	STRAWBERRY
GOOSEBERRY	STRAWBERRY, Preserved
GRAPE	VIOLET

All of these Flavors are of the highest concentration, have the delicious aroma of the fruit itself, and have been manufactured with a special view to permanence and to **withstand considerable heat**. In addition to the large amount of natural extractive matter from the fruits present, the Flavors contain sufficient Ethers, Esters, Vegetable Tinctures, etc., to provide the necessary strength and

impart the special characteristics necessary and claimed for this group.

One ounce only is required for 100 pounds of candy for pan work, hard candies, fruit drops, lolly pops, and also chewing gum, in fact, in all goods where the Flavor is introduced at comparatively **high temperature**.

For all other kinds of confectionery, particularly cream work, the following groups have been successfully employed:

TRUE FRUIT AROMA ESSENCES

Extra Concentrated

which represent nothing but the extractive matter of **sound, ripe fruit**; and our

FRITZBRO-AROMES

which are the **Ideal Flavors of Highest Concentration**, based on Fruit Extractions and fortified with other harmless ingredients to accentuate the **special characteristics** of the respective fruit.

With these three lines, you can solve **any problem** of flavoring candies, of whatever kind they may be.

Samples and further details will be cheerfully furnished upon application.

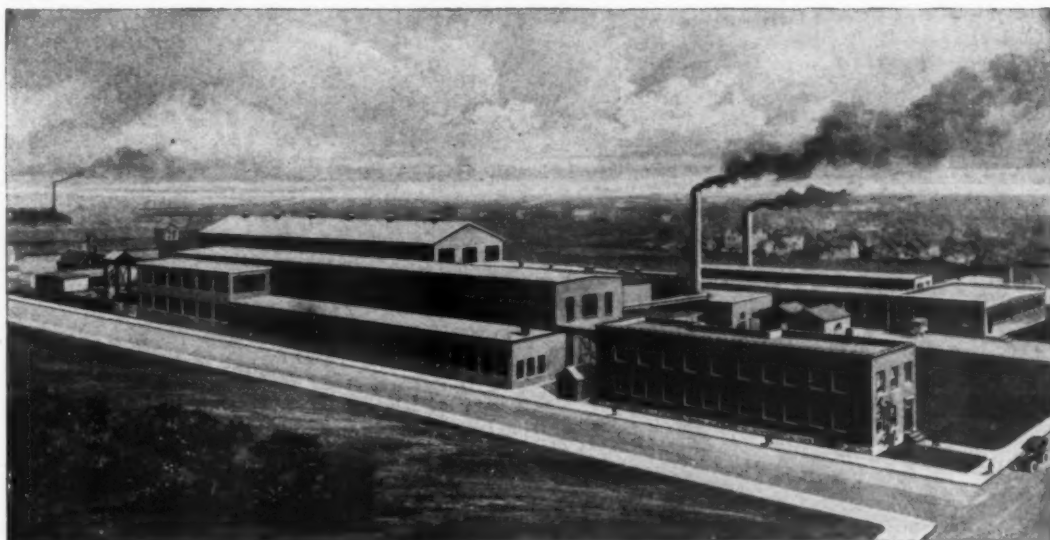
FRITZSCHE BROTHERS, Inc.

CHICAGO BRANCH:
33-35 West Kinzie Street

82-84 Beekman Street,
NEW YORK

Announcement

We have made arrangements with the J. P. Devine Co., Buffalo, N. Y., for the manufacture in this country of the VIENNA PLASTIC PRESS and the VIENNA PLASTIC AUTOMAT and have been appointed their agents for the various other lines of machinery used by the candy and chocolate industry, such as the DEVINE CONTINUOUS COOKER and the DEVINE 5-ROLL and 3-ROLL STEEL REFINERS—52" x 22", 51" x 20" and 40" x 16".



Plant of J. P. Devine Co., Buffalo, New York.

We are pleased to make this announcement regarding our new connection, as the J. P. Devine Co. have one of the largest and best equipped plants in this country for the manufacture of special machinery. Their highly efficient organization and established reputation for excellent workmanship enables us to be of greater service than ever to our customers and friends.

The J. P. Devine Co. maintain a completely equipped Experimental Laboratory, in charge of experienced physicists, chemists and engineers, where your candy problems can be solved without expense or obligation to you.

SPECIAL MACHINE COMPANY

39 Cortlandt Street

NEW YORK CITY

Chicago Representatives — W. & N. HOLMAN, Permanent Confectionery Exhibit, Wrigley Building

Kandex will solve your Caramel Problems

What Kandex Does

It produces a caramel that will stand up however hot or humid the weather—a caramel that can be cooked at a lower temperature—making it softer and better to eat—a caramel with wonderful body—a caramel that will not “squat” or leak—but that stays firm, shapely, yet soft at 120° F., and 85% humidity.

Kandex insures 100% Quality, yet in most cases cuts your cost of manufacture from $\frac{1}{8}$ to 2 cents a pound—1 pound of Kandex will replace 4 pounds of sweetened condensed milk.

What Kandex Is

Kandex is an absolutely pure—absolutely healthful product consisting mostly of protein and fat—just the two ingredients you are looking for when you buy a milk product. One pound of Kandex contains 4 times as much protein as 1 pound of condensed milk.

How to Prove Kandex

Send for a Sample today and full directions for the use and proof of what a big manufacturer calls the “wonder product of the age”—for Kandex is new. But not untried. It has made good for more than a year in laboratory tests and in the plants of the country's most famous manufacturers.



Who Is Back of Kandex

A company that has been supplying the highest grade manufacturers in the country with the highest grade products made for more than twenty-five years—

*For Sample
address Kandex Department*

THE NUCOA BUTTER COMPANY
NUCOA BUILDING

293 Fourth Avenue

New York

Announcement

We take pleasure in announcing that we have completed arrangements with the Special Machine Company of New York City, who are prepared to accept orders for:

DEVINE CONTINUOUS VACUUM COOKERS
Steam Jacketed or Open Fire

DEVINE 5-ROLL and 3-ROLL STEEL REFINERS—LARGE CAPACITY
52" x 22" 51" x 20" 40" x 16"

COMPLETE PROCESS FOR THE EXTRACTION OF 98% PURE COCOA BUTTER

COMPLETE PROCESS FOR THE RECOVERY AND DRYING OF
MOULDING STARCH

THE DEVINE-VIENNA STANDARD PLASTIC PRESS FOR FILLED CANDIES
Clear or Satin Finish

THE DEVINE-VIENNA PLASTIC AUTOMAT
An ingenious combination of Sizer, Press, Conveyor and Cooler

DEVINE TRIPLE HAND-HAMMERED COPPER KETTLES

DEVINE VACUUM PANS

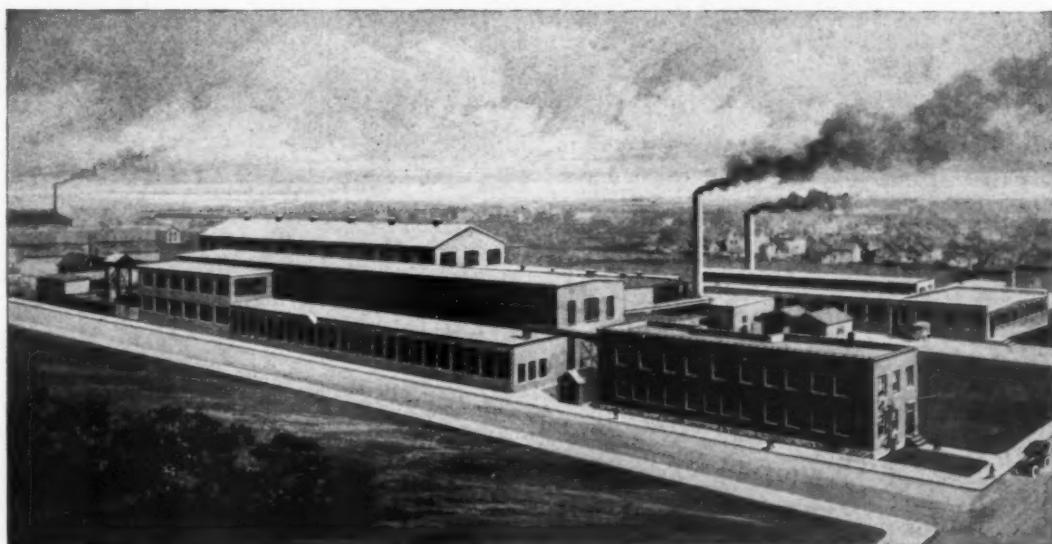
DEVINE VACUUM DRYERS AND EVAPORATORS

We have all the facilities and equipment for the complete manufacture of standard and special machines in one plant under one management.

Twenty-five years' experience designing and manufacturing special Apparatus.

J. P. DEVINE CO.

BUFFALO, NEW YORK



Plant of J. P. Devine Co., Buffalo, New York.



No Gray-Ashy Chocolates This Summer

Not if you use

ACOCOAT

The Pure Vegetable Butter that Stands Up

Acocoat will stand up in any weather. It was perfected for chocolate work, kisses, caramels, nougats that hold their shape and retain their satiny gloss however high the temperature.

Acocoat is the result of months of research work—months of laboratory tests—and has made good in the biggest plants in the country.

It replaces Cocoa Butter on every count and gives results not possible with cocoa or any other butter on the market.

Don't have any "Returned Goods" evil this season. Let Acocoat insure your products from plant to consumer.

Send today for sample and full directions. We will also send a sample of Acoset—a hardener. We maintain a fully equipped laboratory specializing on our vegetable fats and oils. You are invited to use the services of our chemists and practical confectioners—put any of your manufacturing problems up to them.

American Coconut Butter Company

Makers of ACOMO, ACOMINE and MAROKO

CHICAGO
127 N. Dearborn St.

NEW YORK
297 Fourth Avenue



To insure prompt service, complete warehouse stocks are maintained at the principal distributing centers.



ATLANTIC

—the super-clarified

GELATINE



FOR more than two years we have been constantly at work in our laboratories striving to develop a process which would mean greater purity, greater clarity, for Atlantic Gelatine. And now our months of ceaseless efforts and experiments have resulted in a super-clarified gelatine so pure—so clear—that you will admit these features the moment you see Atlantic in solution.

Atlantic Fears No Pure-Food Legislation

But super-clarity, even with our special process, would have been impossible were it not for the fact that the raw materials used in Atlantic are finer than those used in the making of most gelatine. That is why Atlantic Gelatine passes the pure-food requirements of any state in the Union—even Pennsylvania and North Dakota.

Not only is the superior quality of this super-clarified gelatine to your advantage, but likewise is there a greater economy in the use of Atlantic. Grade for grade, it costs less than others and does more.

Make Us Prove Its Merits

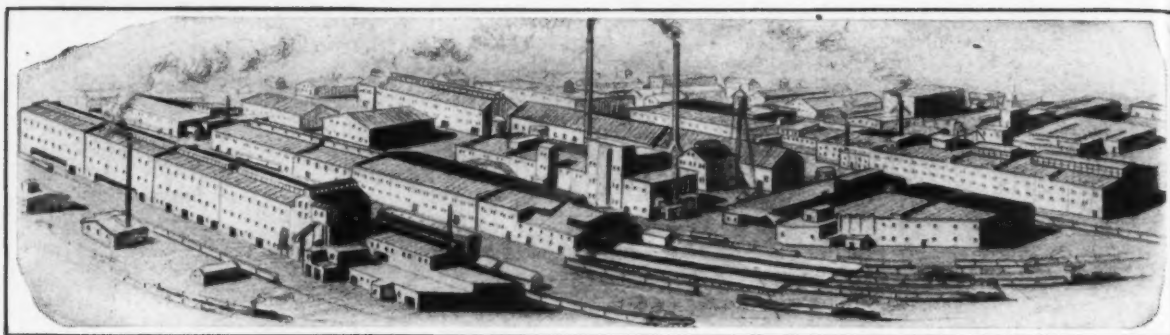
Send for a barrel of Atlantic Gelatine today. Use five, ten, or even fifteen pounds. If, after a fair test, you decide that Atlantic isn't your gelatine, send back the unused portion and we will pay freight both ways.

That's how sure we feel when we make the statement that Atlantic—the super-clarified gelatine—is a better gelatine and will save you money.

ATLANTIC GELATINE COMPANY
Woburn, Mass.

— BRANCHES —

NEW YORK CITY	BALTIMORE	CHICAGO
Room 1081, Woolworth Bldg.	1012 Union Trust Bldg.	Suite 510, 118 N. La Salle St.
SAN FRANCISCO		
Room 240 Hansford Block, 268 Market St.		



Where "UCOPCO" is made

There Are Reasons Why This Plant Has Been Operating to Capacity for the Past *Five* Months

WHEN any plant finds it necessary to run to utmost capacity during a period of depression, it proves conclusively that its product must rank far above the average.

During the past *five* months our mammoth plant has been running night and day and immediately shipping its entire production.

Salesmanship must be given credit for its part in creating this unusual success. But salesmanship alone could not produce this phenomenal condition.

The product must be right.

Let us show you why UCOPCO Gelatine is so tremendously popular.



The United Chemical & Organic Products Co.
4200 S. Marshfield Ave. Chicago, Ill. New Orleans 401 E. 45th Street New York, N. Y.

"UCOPCO Comes Sealed in Red Drums"

Ucopco Pure Food Gelatine

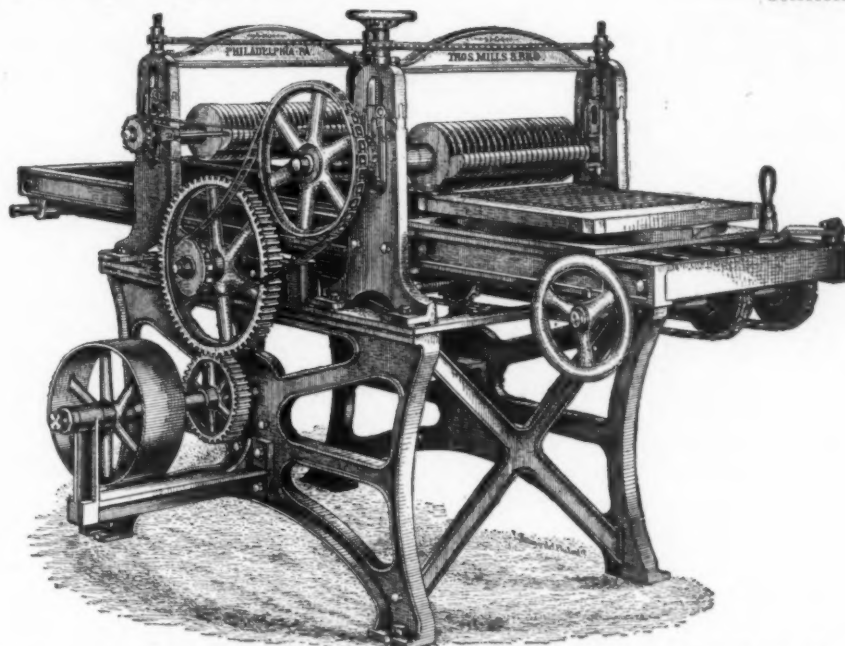
THOS. MILLS & BRO., Inc.

Established 1864

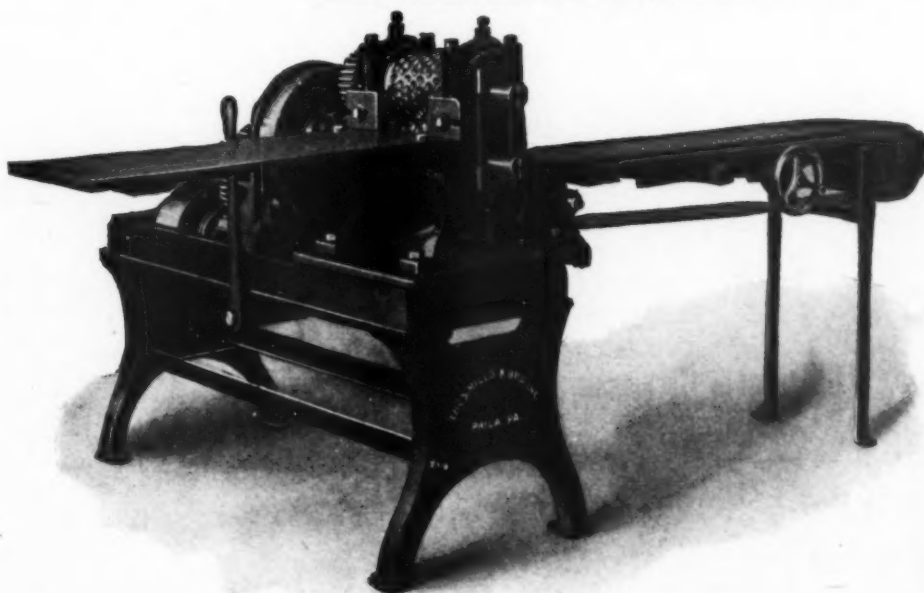
CONFECTIONERS' TOOLS AND MACHINERY

1301 to 1315 North Eighth St.

PHILADELPHIA, PA.
STATION O



Automatic Caramel Cutting Machine—Cuts Both Ways in One Travel of the Bed, Used in Leading Factories for Caramels, Coconut Blocks, Etc., Send for Circular.



Large Power Drop Frame with Stand and Endless Belt Conveyor; Our Latest Type for Large Output and Heavy Duty.

Our Catalog "O" Should Be in the Hands of Every Factory Superintendent; Sent on Application. Please Mention "The Candy Manufacturer" It Helps.

WHEN IN
CHICAGO



VISIT OUR
BOOTH 32

Vanilla Flavoring Better than the Bean

THERE is no test of Vanilla flavoring quality, economy or satisfaction that is not best and most dependably met by Ozone-Vanillin.

An ounce of Ozone-Vanillin has the flavoring energy of about 2½ pounds of superior Vanilla beans and by proper manipulation is soluble in 10% alcohol. The immense saving herein attained is truly representative of the efficiency principles without which no manufacturing organization is really complete.

Ozone-Vanillin is absolutely pure, derived solely from selected vegetable sources by an exclusive process which eliminates every trace of superfluous matter and derives an aromatic

body identical with the Vanillin which would result from perfect purification of the chief flavoring principle of best Vanilla beans.

Ozone-Vanillin is utterly uniform in character and results. Herein lies a significant advantage over Vanilla beans, which by their nature are bound to vary in size, quality and flavoring value.

Thus Ozone-Vanillin is highly favored by those progressive manufacturers who realize that there can be no standardization of the finished product or of ultimate profit unless the flavoring base be standard in all the essentials of quality, economy and satisfaction.

UNGERER & COMPANY

124 West 19th Street

Philadelphia, Pa., 514 Arch St.

Chicago, Ill., 326 W. Madison St.

NEW YORK CITY

San Francisco, Calif., 116 N. Montgomery St.

New Orleans, La., 305 Baronne St.

Paris, France, 11 Rue Vezelay

OZONE-VANILLIN

PURER, SURER THAN THE BEAN

Remember Everybody Likes CANDY

AT the Annual Convention of the National Confectioners' Association which was held in Chicago in May the above slogan was adopted as the official slogan of the confectionery industry. This slogan was chosen from hundreds of other slogans because it met better than any other slogan submitted the qualifications of a popular and lasting slogan. An analysis of the slogan shows that it possesses the suggestive features which have made slogans used by other industries so productive of results.

We are all familiar with the value of "Say It With Flowers" to the florists. A look into the florist's business shows that this slogan has made it possible to develop uses of flowers that were not previously enjoyed because the lack of definite suggestion as to using flowers as gifts was not put into the public mind.

The slogan, "Gifts That Last," has been equally productive for the jewelers all over the country.

The slogan, "Save the Surface," has meant wonderful things to the paint and varnish manufacturers. It will be seen that all these slogans are simple, easily understood by whoever may read them and definitely suggestive.

Analyzing the Slogan

In choosing the slogan, "REMEMBER, EVERYBODY LIKES CANDY," it was necessary to get away from any imitation of any other slogan. Many of the slogans submitted showed very conclusively that those who originated them had in mind the slogan, "Say It With Flowers," and so they suggested slogans like "Say It With Candy." It was felt that our great industry could not afford to lend itself to stealing the ideas and thunder of others, and therefore it was necessary for us to be very careful to get away from anything that might imitate these other slogans.

It is also necessary to have a slogan that contained words that were simple and that everybody could read, because we knew that the slogan would appeal not only to grownups, but to children. It also had to be short, so that it could be read quickly, as we knew in most instances the slogan would be glanced at, and therefore had to be absorbed at a glance. Also, we wanted something that was happy, not too formal. For example, slogans like "Candy,

the Universal Gift," were too formal. Most people would not be impressed with same because in a sense the slogan would be too high-toned. The slogan also had to be euphonious, so that it would read smoothly and sound well when repeated.

It also had to be applicable to seasonable suggestions, holiday suggestions, social functions and to purchases for children, for young ladies, for wife, for mother, for the family, for business gifts, for charitable remembrances and also for table uses, such as desserts and domestic uses.

It had to be economical in the way of cost of printing, that is, a slogan that could be printed in one color if necessary or in more than one color without destroying its individuality. It had to be adaptable to transparencies, capable of humorous applications in cartoons and stories, usable in connection with all grades of candy without reflecting upon quality of higher grades or depreciating the lower priced candies, and above all, it had to be a slogan that would not lose its effectiveness by repetition, but would grow with use.

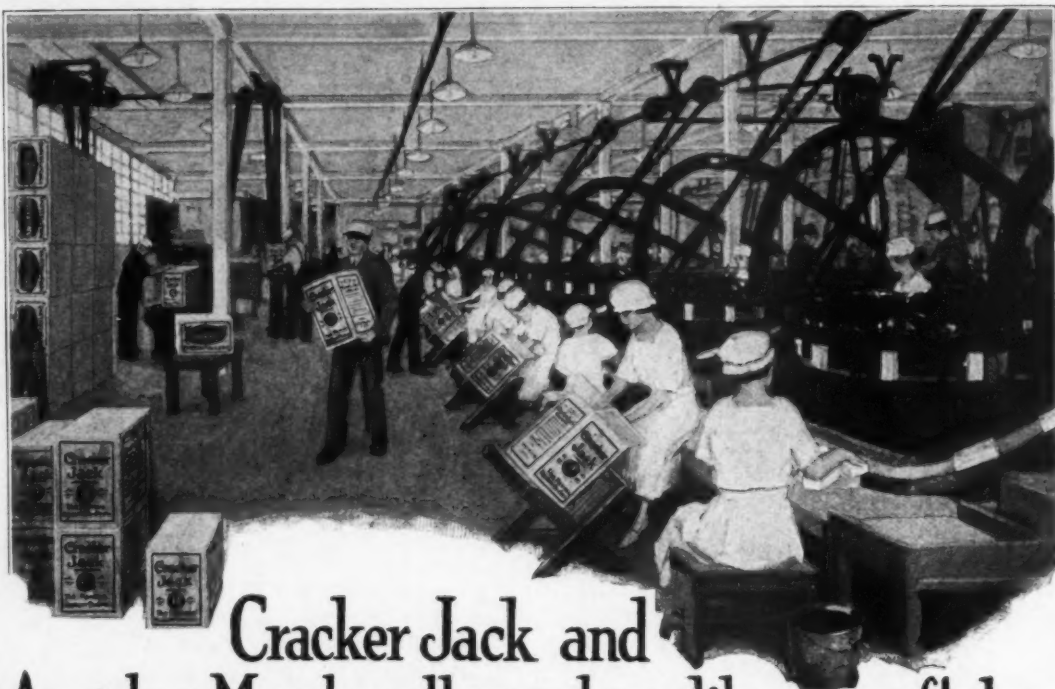
The hand with the string on is symbolic of the words "Don't Forget or Remember" and the hand was used because it would give the slogan individuality over that of mere words. The tying up the word "Remember," with the hand was something that it was felt wise to do in the beginning, though it may be discontinued in the end. The word "Everybody," means everybody, not any particular person. For example, the slogan, "Her Most Precious Gift," would mean that it would be suggestive of purchasing candy only for "Her". You will notice that "Say It With Flowers" does not state any particular person or class of persons, that you can "Say It With Flowers" to anybody.

The word "Likes" is the fundamental reason why people buy candy. They do not buy it because it is pure or has food value, but they buy it because they like it. Of course, their having confidence in its purity and food value is assumed.

The word "Candy" includes all kinds of candy—everything that is classed as candy.

The hand with the string on or the word "Remember" is the suggestive factor. For ex-

(Continued on page 36)



Cracker Jack and Angelus Marshmallows drop, like snowflakes in winter, into — *Container Club Fibre*

IT'S no longer an experiment. It's the biggest shipping success of the age!
Container Club Fibre is just suited to CANDY.

The shock-absorbing qualities of our fibre is what Saves the Candy! Our fibre containers are sanitary. They have no holes or cracks to let the dust in. Our corrugated air spaces *lock out the heat*. The softest candies ride safe to your customer, undamaged—unmelted!

Container Club Fibre S-A-V-E-S!

It saves you cash over wood at the start

It saves nine-tenths of your packing-room space

It saves your soft candy from melting

It saves your candy from breaking

It saves freight cost for your customer

It saves your customer—FOR YOU!

Because it saves so tremendously, in so many ways, the use of fibre has grown in ten years from almost nothing to \$70,000,000 per annum! Why then use other containers when the *quality-fibre* which our Members make will save money for you? This advertisement is our invitation to you—to ask us about it. A quick response will advantage us both.



Quality Mark

Write to:

The Container Club

Dept T2, 608 South Dearborn Street, Chicago, Illinois

[Note: The Container Club is an Association of manufacturers—builders of COR-RUGATED and SOLID fibre containers of very superior quality. Their individual plants—some forty in number—are located from Massachusetts to California.]



EDITORIAL

Put Candy on the Menu

By way of merchandising, we might say, the editorial in last month's issue of *THE CANDY MANUFACTURER*, entitled "For Dessert, Everybody Likes Candy," the following letter was sent to the leading publications in the hotel and restaurant fields together with a proof sheet of the editorial:

Gentlemen:

I am enclosing a reprint of the editorial page of our June issue and I wish to call your attention especially to the editorial entitled "For Dessert—Everybody Likes Candy."

We would like to have your opinion on the suggestion of including confectionery on the hotel menu. Besides the probability that the guests would be responsive to a suggestion of this kind on the menu, we believe that it would furnish an individuality to the cuisine of any high grade hostelry.

The fact is that confectionery is just as logical a dessert as pie, pastry, ice cream, fruits, etc., and if it were possible to order a few pieces of chocolate creams and bonbons or chocolate-covered nut meats or toasted marshmallows, etc., from the menu card for the dessert part of a meal, then confectionery would be eaten as a food by a great majority of the public and to the profit of the hotel or cafe management.

Confectionery as a dessert lends itself to many possibilities of variety and service and its supply can be more easily stabilized than other desserts. A supply of candies can always be kept available for any emergency.

Will you kindly advise if you will give this suggestion some space in your publication.

Very truly yours,

(Signed) EARL R. ALLURED,
Publisher.

The following reply was received from "The Hotel Monthly":

In reply to your letter of June 30th.

"The Hotel Monthly" is so much in favor of candy being listed on the hotel menu that we have published the book "Candy for Dessert," by Paul Richards, price \$1.25, and I am enclosing herewith copy of editorials that have appeared in "The Hotel Monthly" in recent years.

We have printed special articles calling attention to the candy shops in various hotels, notably the McAlpin of New York, and the Sinton of Cincinnati, and the Texas of Fort Worth.

Very truly yours,

(Signed) JOHN WILLY.

P. S. Am reproducing part of your editorial.

Marked copies of our June issue were sent to a few hotels. The following letter was received from *The Drake*:

For Dessert—"Remember, Everybody Likes Candy"

Mr. Earl R. Allured, Publisher, *The Candy Manufacturer*, Chicago, Illinois.

Dear Sir:

Your letter of the 26th instant to the attention of Mr. Cutter has come to my personal attention. We have always believed in listing confectionery on the menu and we did this for a number of months. We found, however, that in view of the fact that we have leased the candy privileges as a concession there were various complications resulting and more loss than gain. Therefore, at the concessioner's own request we have recently omitted it. We will take the matter up with her again and see if the former arrangement cannot be bettered. Your suggestion, however, that "when a guest orders confectionery, the waiter might bring in a tray of assorted candies and the selection could be made in much the same corresponding way that French pastries are served" would not work at all, for half the candy thus exhibited would be eaten by the help, no matter how much we might endeavor to protect the tray.

We are very glad indeed to receive constructive suggestions and criticisms and, as stated, we will endeavor to work this out again for the satisfaction of our guests as well as for ourselves.

Very truly yours,

(Signed) TRACY C. DRAKE,
President, *The Drake Hotel Company*.

Several other hotel publications have expressed their willingness to co-operate in presenting to the hotel industry the facts regarding the nutritional value of pure candy and a practical plan of serving confectionery as the dessert part of a meal. With the co-operation of our industry this magazine will endeavor to keep the hotel trade press supplied with information and perhaps some inspiration on this subject which should logically result in a very substantial recognition by the hotel industry of the fact that candy is a food which should be listed on the menu and should be available as a dessert to the patrons of every modern hostelry, cafe and restaurant.

May we hear from manufacturers and salesmen who are willing to give this movement some special attention and "follow up" and, by getting candy on the menu of a number of leading hotels, thereby establish a valuable precedent.

Let's keep the ball rolling and put up a united front in a determined drive to make the candy industry hit its proper stride this year. "All aboard for prosperity."

Taste vs. Appearance in Candy

by Dr. A. P. Bryant

Consulting Chemist, National Confectioners' Association

OF the five senses, that of sight is paramount. Our first impressions are almost invariably based on appearance and that which does not appeal to the eye must indeed have sterling qualities of odor, taste or feeling to render it attractive. In fact, the pleasure derived from any of the other senses is greatly increased if there is a definite appeal to the eye.

It follows as a natural consequence that all articles of manufacture must meet competition, first by the appearance and then by sterling worth as to durability, convenience of use, taste, etc. Oftentimes the value of a material as judged by appearance is found to be exaggerated. Who has not carried home a basket of peaches covered with red mosquito netting only to find the fruit hard and green, and who has not purchased a fine article of clothing only to find that the color was transient or the goods slazy underneath the sizing? But in spite of occasional sad experience appearance remains the big factor in the selection of a commodity.

The confectioner recognizing the value of the appeal to the eye naturally tries to make his products just as attractive in appearance as possible. To this end he devises various shapes for his candy and secures pleasing combinations of colors and flavors. In short, all efforts of human ingenuity are directed toward the making of a piece of goods or package that will strongly appeal to the eye. Following along the same line some candy containers which have evolved from the humble paper bag that many of us remember as the only container to the most elaborate boxes that can be made so that today the young man who gives his girl friend a box of candy pays about as much for the box as for the candy.

In the attempt to obtain an attractive appearance, actual quality must not be overlooked. The purchaser of a beautiful box of chocolates, beribboned, befoiled, and befussed, who finds the contents unsatisfactory is a customer lost. The writer not long ago purchased a most attractive box of candy and took it home to friend wife, who exclaimed over the beauty of the package; but the contents proved a disappointment, because the chocolate centers were dry and hard and the chocolate-coated "fruits" and "nuts" contained but a trace of fruits and nuts. The result is that no more candy of that make is likely to enter that home.

On another occasion a fine appearing box of chocolate creams proved unsatisfactory because the coating was hard and chippy and left a waxy residue in the mouth. In other words,

too much hardened or high melting fat had been used in the coating.

As a boy the writer liked gum work, and does today for that matter if the quality is there, but the cheap "AB" gum work threatened for a time to kill the demand for this class of goods, because quality had been sacrificed for appearance.

What has been said about gum work applies equally to much of the imitation cocoanut work where appearance has been maintained or improved, but the use of large quantities of cerealine or the like has not only reduced the cost, but very greatly reduced the desirable taste.

Colors in candies are recognized as permissible and necessary. They are not used for the purpose of covering up inferiority or to imitate some more valuable material, but to render the candy attractive in appearance and enable the consumer to select certain flavors. But care should be taken not to add so much color as to make the candy look like a dye works. The very purpose of the colors is thus thwarted and suspicion is aroused in the minds of the consumer. Illustrations of this fact frequently come to the attention of the writer.

Appearance undoubtedly is a very great asset in selecting candy, but the factor of quality or taste must not be lost sight of for a moment. Fancy colors, attractive box and careful packing are essential, but the final judgment is reached after all when the candy reaches the mouth and the discriminating buyer will select those makes and kinds of candy that tickle the palate and will after one trial turn down those candies which, although making every appeal to the eye, fail to satisfy the taste.

Reference was made to the elaborate candy box. It is very much of a question whether the costly candy box is not in the long run an actual detriment to the candy manufacturer. The box makers naturally wish to sell the expensive package. The person who buys candy does not wish to appear cheap and buys perhaps the fanciest box in the show-case. The result is that less candy is probably consumed than would be the case were a standard box of reasonable cost used. The consumer has, we will say, one dollar and fifty cents to spend for candy. If fifty cents of this goes for the box the actual purchase of candy amounts to one dollar. If twenty-five cents goes for the box, the candy consumed would be increased by twenty-five per cent.

But, says the manufacturers, the young man wants the highest priced package he can buy as a votive or peace offering. These are the

(Continued on page 35)

X-Method of Making Invert Sugar

Dr. Murphy is one of the foremost Sugar Chemists in America. For fourteen years he was with the American Sugar Refining Company as Chief Chemist and assistant to the Chief Refiner in Boston.



Shall we reserve for you a bound volume of *The Candy Manufacturer* containing Mr. Murphy's complete series? Price \$5.00. It will also include of course all the other serials of technical articles on schedule, any one of which is worth the price of the volume.—EDITOR.

The tenth of a series of articles on "The Physical Properties of Sugar," and what can be done with them to obtain any desired result in confectionery

by Frederic W. Murphy

Frederic W. Murphy Laboratories

Exclusively for The Candy Manufacturer

THE problems of the manufacturing confectioner are many, but his main problem is to produce worth-while goods at the lowest possible price consistent with quality. This means that he must purchase the best raw materials at the best price and all his operations must be done on a most economical plane.

Invert sugar is always present in all confections, but the percentage present should always be the same in any individual confection. That there is a decided advantage in having a formula based on an exact percentage of invert sugar, cane, etc., there is no question.

Invert sugar has a definite place in the confectionery industry as well as in the baking and beverage industries. In hard candy there must be a definite quantity to prevent the goods from graining, at the same time an excess should be avoided to prevent stickiness.

If the manufacturer has his various confections analyzed he will find that his perfect goods have at all times a positive percentage of cane sugar and invert sugar and that the goods which he classes as imperfect differ in their percentages of cane sugar and invert sugar from this first standard.

Invert sugar is composed of two sugars having the same formula, but possessing entirely different physical properties. The two sugars are dextrose and levulose. Dextrose is the predominant sugar of corn syrup. Levulose is the sugar found commonly in fruits and is sometimes, but rarely, called fructose. Levulose has the physical property of absorbing moisture from the air. Dextrose does absorb, but in relatively small amount.

If invert sugar is present in large quantities, on account of the presence of levulose, candy will, if of the hard type, become extremely sticky. If invert sugar is present in insufficient

quantities, especially in the creams, the candy will be grainy (or stale).

The manufacturer has had offered to him many invert sugars under trade names, varying in their composition of invert sugar and cane sugar. It is obviously necessary if one is purchasing invert sugar to purchase one which is as near one hundred per cent invert as possible.

Because these commercial invert sugars contain, as a rule, large and varying amounts of uninverted cane sugar the larger manufacturers in order to secure a standard product at all times, have found it to their advantage, both from a financial standpoint as well as from an economic one, to manufacture their own invert sugar.

After all it is a very simple matter, regardless of which method is used. Almost any mineral acid, such as muriatic, sulphuric, acetic, etc., will invert cane sugar. The organic acids such as tartaric, citric, etc., also can be used. In the use of sulphuric acid, after the inversion has been accomplished the acid must be removed by adding lime to form an insoluble precipitate. This precipitate must then be filtered off and the syrup concentrated. This makes the process more complicated than by using other acids, such as muriatic, which can be neutralized with sodium bicarbonate which leaves common salt in the solution in a very small amount.

There is also the very fine method of inverting sugar by the use of invertase. Invertase is a secretion of the yeast cell and is capable of inverting sugar. Its action is not as rapid as that of an acid, but, as a rule, twelve to twenty-four hours is sufficient to complete inversion, depending upon the amount of invertase used. Variable degrees of inversion can be accomplished according to the length of time the in-

(Continued on page 32)

III—Testing and Grading



The third of a series of seven articles on Edible Gelatin

by **Robert H. Bogue, Ph. D.**

*Industrial Fellow of the Mellon Institute of Industrial Research, Pittsburgh, Pa., and
Research Chemist for Armour & Company, of Chicago, Ill.*

Exclusively for **The Candy Manufacturer**

IN the evaluation of gelatin there are two distinct objects in view. The first and most important of these is a determination of the edibility of the product, and the second is the determination of the relative grade of the edible material.

The pure food and drugs act of 1906 and the several state pure food laws have attempted to minimize the possibility of any material being sold for food purposes that fails to meet the reasonable requirements of a wholesome food product. It is recognized by these laws, and by the bureaus whose duty it becomes to enforce these laws, that certain impurities in foods, as metals or other chemical compounds, may constitute a menace to the health of those persons eating such food preparations. It is recognized that bacterial decomposition is impermissible in wholesome foods. It is recognized that certain preservatives may, under some conditions, be desirable to prevent such decomposition, but that the amount added must not be sufficient to make the foods containing them of questionable edibility. It is recognized that the ingredients going into the preparation of foods should be clean and wholesome.

Specifications for Edible Gelatin

The enforcement of these general principles makes it imperative that particular specifica-

tions should be laid down to constitute an arbitrary standard to which each type of food product must conform. In the case of gelatin the requirements make it imperative that in order

to be passed as edible the product must not contain zinc in excess of 100, copper in excess of 30, or arsenic in excess of 1.4 parts per million. Lead and tin are expected to be absent. Sulphur dioxide (sulphurous acid) may be present in small amounts according to most of the state laws. The bacteria present must not be in excessive amounts, and *B. Coli*, the bacterium which by its associations indicates fecal contamination, must be absent. The odor and taste should be free of objection, and remain so after putting into solution and allowing to stand at room temperature for at least 48 hours. A reasonably firm

jelly is expected to be formed upon bringing a solution of the product to low temperature.

These tests constitute the means employed by the food authorities to enable them to pass upon the edibility of gelatins offered in the market for edible purposes. That they are of great value in regulating the type of product put on the market is unquestioned, for certainly any gelatin which failed to pass these requirements should by all means be rejected. But it also, in fairness, should be pointed out that the above tests are admittedly inadequate, and for two reasons. In the first place, there is no

Dr. Bogue's Complete Serial on Edible Gelatin

MAY:
Raw Materials and Manufacture
JUNE:
Constitution and Properties
JULY:
Testing and Grading
AUGUST:
Chemical and Bacteriological Action
SEPTEMBER:
Buying and Handling
OCTOBER:
Dietary Value and Physiological Action
NOVEMBER:
Importance in Food Products

This series will be supplemented by articles from candy superintendents on the practical handling of gelatin in candy making.

Shall we enter an extra subscription sent to your home address where these instructive articles can be studied at your leisure?—Editor.

provision by which stock from objectionable sources, as for example from horses, is detected and rejected. In the second place, the tests are incapable of detecting the admixture into the stock of partly decomposed material, provided the manufacturer is clever at dispelling the objectionable odor and taste by one means or another, and killing the bacteria by disinfection. Now I wish emphatically to urge that neither of these practices are employed by any reputable American house, and the gelatin manufacturers, especially those represented by the United States Gelatin Manufacturers' Association, are exceedingly scrupulous upon the purity and high quality of the raw material that goes into their gelatin. But the point I wish to make is that there has from time to time appeared on the market material that is sold as edible gelatin, but should by all aesthetic qualifications be sold as glue. The sale of such products only injures the high reputation attained by the better houses, and they should be eliminated. Such practice could be done away with by requiring an affidavit upon the stock employed in the manufacture of all edible gelatin offered for sale, and an organized system of factory inspection.

As the public has become educated upon the desirability of insisting upon only the purest of food products, the manufacturers have found it at first expedient—and more recently their actions have been inspired by more altruistic motives—to vie with each other in producing—not the least expensive article which they could put across—but the highest class of product from the pure food and the aesthetic point of view that could be made. This is indeed one of the most favorable results of the long campaign that has been waged for pure foods. The best houses no longer put out a gelatin that will just pass the food laws. They put out gelatin that is so far superior to the standard required that one wonders at the reason for the continued existence of such "standard" values. *It is probable that the standard could be raised a hundred per cent without creating even a ripple of attention by the reputable gelatin manufacturers of America.*

As an example, the addition of sulphur dioxide is no longer a part of the process in many gelatin houses. This was formerly regarded as almost a necessity, as it acted as a germicide and also was a powerful bleaching agent. But by the more careful selection and handling of the stock it has become unnecessary to add any germicide, and the public is beginning to find as much beauty in the light amber unbleached gelatins as they formerly found in the nearly colorless, highly bleached products.

The Relative Grading of Gelatin

The second object sought in the evaluation of an edible gelatin is a determination of the relative grading which it is to receive. It was pointed out in the first chapter that in the

boiling process a number of separate runs were taken off, and in the second chapter it was shown that there would be a chemical difference between these several runs because of the longer treatment and higher temperature to which each successive run is subjected. This more drastic treatment results in a greater hydrolysis, that is, the gelatin molecule becomes broken into proteoses, peptones and amino acids, and there will be a larger proportion of these degradation products in the later boilings. There will also be increasing amounts of non-collagen material dissolved, which will become a part of the final product without imparting to it any jellying properties. That is, it will act as a dilutant.

Now since the proteoses, peptones, amino acids, and non-collagen material are present in increasing amounts in succeeding boilings, and since these substances do not produce jellies and are of lower viscosity than gelatin, it follows that the jelly strength and viscosity of the first run will be the highest, and that these properties will decrease regularly to the last run. The *edibility* of the last run is as satisfactory as the first run, but the *test* is lower.

If the value of commercial edible gelatin is dependent upon the actual amount of pure unhydrolyzed gelatin which it contains, then the value must decrease with succeeding runs. It has been shown in the writer's laboratory that whereas the first run might contain as much as 94 per cent of its nitrogen as gelatin, the sixth run might contain only about 60 or 70 per cent of its nitrogen as gelatin, the balance being in the form of proteose, peptone, etc. From this point of view, a satisfactory means of grading would be permissible from a determination of this ratio.

Determining Gelatin Values

The uses to which edible gelatin is put are many, but for the most part they depend upon the property of the material to produce a firm jelly. In all such cases a measurement of this property affords a satisfactory means of evaluation. Where a high viscosity at some particular temperature is the property sought for, an evaluation might properly be based upon just that property.

These three characteristics of gelatins: the gelatin content, the jelly consistency, and the viscosity, have been found to be usually parallel. This would mean that an evaluation of a number of gelatins by a determination of any one of these properties would result in a differentiation entirely similar to that which would be obtained by a determination of either of the other properties. In those cases where the jelly consistency and viscosity are found not to be strictly parallel, it has been observed that a measurement of the melting point, or, which amounts to the same thing, a measurement of the viscosity at a temperature near the melt-

(Continued on page 37)



Air Conditioning Apparatus and Distributing Ducts for Caramel Packing Department.

Some Theories of Refrigeration and the Machinery Employed

The second of a series of articles on
Refrigeration and Air Conditioning
and its Application to the Candy Industry

by **A. W. Lissauer**
Refrigerating Engineer

The problem of maintaining an ideal temperature with proper ventilation and of keeping the factory wheels turning at a profit during the summer months as well as during the balance of the year has been largely solved by the development of the science of air conditioning and temperature control which, by the way, is a very interesting evolution.

Mr. Lissauer has treated this series impartially and comprehensively. However, the subject of refrigeration is such an inexhaustible one that we expect our readers to submit their questions and special individual problems in temperature control—installation and operation—and give us opportunity to make this series of articles most valuable to every individual reader of
THE CANDY MANUFACTURER.

IT is well known to everybody that when water is heated under ordinary barometric pressure of 30" of mercury, it boils at a temperature of 212° F., and that once it is heated to that point, it requires to have heat added to continue the boiling although the temperature remains constant. This heat is used to supply the heat of vaporization which amounts approximately to 1,000 B. T. U. per pound of water evaporated. All liquids are like water in this respect, although they have different boiling point temperatures and require varying amounts of heat to enable them to continue boiling.

How Liquid Ammonia Functions in Refrigeration

Liquid ammonia containing no water acts in this way also and if it is put in pipes which are placed in a room containing a certain amount of heat, that heat will be transmitted through the pipes to the ammonia and will boil it, changing it into a vapor, due to the absorption of the heat of evaporation. Consequently, it may be seen that refrigeration by means of liquid ammonia is not done actually as an absorption of heat from the surrounding air, but is actually a boiling of the ammonia by the heat of the air. The heat is used up by the liquid in turning into a vapor. Now then, by

exposing a properly proportioned pipe surface to the heat of the room and passing a sufficient quantity of liquid ammonia through the pipes, practically any given amount of heat can be used up by the vaporization, and so abstracted from the air surrounding the pipes. In this way, refrigeration is applied and cooling done.

It is customary in refrigeration work to standardize the pressure under which this evaporation takes place at 15 lbs. gauge pressure, which is approximately two atmospheres. Under those conditions, the vaporization of the ammonia takes place at 0° F. and absorbs per pound 522 heat units.

Determining the Surface Required

Now, of course, the surface which is required to transmit a given quantity of heat depends on certain factors which are well known, and which depend in turn upon the velocity of the air passing over the pipes, giving a better or poorer contact. In still air, it is probably not possible to transmit through the pipes more than three or four heat units per sq. ft. per degree difference in temperature per hour. This means that with the ordinary direct expansion pipes in a room containing ammonia at 15 lbs. gauge pressure, the air in the room being at say 70°, there will not be transmitted through each square foot of surface more than 210 heat units per hour. Therefore, in order to supply enough heat to evaporate a pound of ammonia under those conditions will require 27 sq. ft.

Now, in moving air, the transmission rate is probably eight or nine heat units per square foot per degree difference in temperature per hour, and consequently in the Bunker systems, the surface exposed can be cut down enormously if one eliminates entirely from one's calculations the freezing of the moisture on the pipes, whereby we no longer have a surface at 0° but one at 32°, which, of course, cuts down the cooling effect proportionately. When, however, the refrigerating pipes are kept constantly wet with water traveling over the pipes in a thin film, the transmission rate is raised to approximately sixty heat units per sq. ft. per degree difference in temperature per hour, and if the circulation of water is rapid enough, even though the pipes are at 0°, there will be no frosting and the full effect of the surface temperature difference can be obtained.

Under these conditions, therefore, it will be seen that the minimum amount of surface exposed will be required to evaporate a given quantity of ammonia, and this forms the basis for the modern development of the application of refrigeration, which I have mentioned heretofore.

Conditions Affecting Ideal Refrigeration

These figures, of course, are based on the best possible use of refrigeration pipes. It is a

well known fact that the least heat will be transmitted through a surface when the mediums on each side are dry. A greater quantity will be transmitted if one surface is wet and the other dry, and the best possible effect will be obtained when both are wet. Now, in order to keep the inside surfaces wet, it is obviously necessary to flood these pipes and keep them constantly full of liquid. The liquid, of course, assumes the same temperature as the vapor which is given off. This can immediately be seen by referring again to the water analogy; there, as everyone knows, steam at atmospheric pressure is at 212° F. and the water is at the same temperature. This equalization of temperature applies to all pressure and where, for instance, steam at 100 lbs. gauge pressure assumes a temperature of 338° F. the water will also have this temperature.

In consequence of the above effect, it is a good idea to equip all of the pipes which are used for the application of refrigeration, in such a way that a head of liquid is kept on them, by the use of a storage tank set at a higher level than the pipes. This tank receives the liquid ammonia from the source of supply, and discharges it constantly, like a water cistern in a house, to the outlets. This tank is known as an accumulator and in most cases consists merely of a strong steel container with the necessary outlets. It is sometimes equipped with cooling coils, so that the liquid which falls by gravity into the cooling pipes may be pre-cooled by the use of the vaporized ammonia which comes from the cooling pipes after it has absorbed the heat of vaporization, and is still at the temperature corresponding to its pressure.

Regulating the Quantity of Ammonia

The quantity of ammonia which comes from the accumulator into the pipes is regulated by what is known as an expansion valve, which is merely a needle valve with a handle and screw, designed to throttle the flow. It is obvious, of course, that with a given quantity of heat in the room to be transmitted through the pipes, the rate at which the heat will be absorbed by the ammonia will depend upon the number of pounds of ammonia passing through the pipes in a given time.

If for a given quantity of heat transmitted, there is too little ammonia passing, the pressure will rise and the liquid and gas will increase in temperature. If too much passes, the pressure and consequently the temperature of the gas and liquid will decrease. Now, therefore, if it is desired to have a certain temperature of refrigerating medium in the pipes, it is easy to regulate the temperature inside the pipes by this expansion valve, so that the flow, and therefore the pressure and temperature, will be regulated. It is customary, as I said before, so to regulate this expansion valve that the standard condition under which all the re-

frigeration machinery is sold, then 15 lbs. pressure or 0° F. may be obtained. It is entirely possible, therefore, to regulate this temperature in the manner noted above, to the point desired, so that the ammonia and its gas will be above 32° F. by merely increasing the pressure in the pipes to about 45 lbs. This pressure in the pipes is known as the "suction" pressure or "back" pressure, as it is the pressure that is present not only on the pipes, but on the inlet or suction of the ammonia compressors.

Maintaining Constant Supply of Ammonia

The next step in the continuous refrigerating cycle is the obtaining of a constant supply of liquid ammonia, as it is obvious that in order to run a cooling system, the raw materials for it must be supplied constantly. Certainly, it would be an impossible condition, were a manufacturer forced to buy liquid ammonia in tanks, evaporate it and then throw away the gas. The ideal way, of course, is a closed system whereby the ammonia gas which has absorbed its heat of vaporization can again be turned into liquid and returned to the cooling coils. This can be done.

Compressors

It is a well known fact that all gases under certain pressures and temperatures which are fixed for that particular gas, will again return to a liquid state. Ammonia gas is no exception, and this gas, when compressed sufficiently and then subjected to ordinary cooling water temperatures, returns to its liquid state. The compression pressure is not extraordinary and under standard conditions is done under approximately 185 lbs. gauge pressure.

This is invariably accomplished in a reciprocating type of compressor, which is similar in action to an air compressor. The principle of operation is the same, no matter what kind of compressor is used, but the apparatus assumes many forms, depending upon the amount of work to be done, the efficiency which is desired, and the first cost which is desired, and the first cost which is thought to be necessary. The cheaper forms are not much less efficient mechanically than the more expensive ones, but they have certain disadvantages which are overcome in the others.

The cheapest form of compressor is known as the single or double-acting enclosed type vertical high speed machine. There, the gas is led through inlet valves into the cylinder; the piston compresses it and discharges the compressed gas out through outlet valves. The cylinders are extended to form an enclosed chamber in which connecting rods and the crank shaft run, the chamber being provided with ammonia-tight stuffing boxes through which the driving end of the shaft projects, which in turn is driven by a pulley or by other means of motive power. Obviously, this cham-

ber is filled with ammonia gas under compression and although the modern machines are made tight, due to the high speed at which they operate, eventually trouble is experienced with leaky gaskets, stuffing boxes, etc. Also in order to reduce the cost, these machines are driven at a fairly high speed, so as to reduce the cylinder volume, the capacity being made up by the increased number of reciprocations of the piston.

Of course, it is obvious that for a given supply of liquid ammonia for cooling, the same quantity of ammonia transformed into gas must be handled by the compressor. The amount of liquid ammonia to be used is heated in the cooling coils, and the volume of gas immediately determines the required capacity of the compressor. Due to the extremely high piston speed, and consequent velocity of gas entering and leaving the cylinders, there is an appreciable loss of volume of gas actually handled as compared to the cylinder volume presented. This means that the compressors of this type have a low "volumetric efficiency" and accounts for the fact that it is usually only employed where first cost is a consideration.

Other machines of a similar type are made which combine the high speed of the type just discussed, but modified so as to conform with the regular steam engine design, instead of the two cycle gas engine design, as above described. In this modification, the piston is operated by a vertical acting piston rod, passing through a stuffing box at the bottom of the cylinder and in turn operated by a connecting rod which is actuated by the shaft. In this way, the enclosed chamber is dispensed with, but due to the fact that ammonia leaks through almost any packing in time, it is found wise to have an enclosed chamber to guard against such leakages.

A highly efficient type of compressor is the slow speed large volume type, driven either by means of a separate steam engine, ordinarily of the Corliss valve type for high efficiency, or else operated by steam cylinders mounted on the same frame. Due to the slow piston travel of this type, the cylinder volume must be much larger, so as to get a given displacement, and consequently, the life is longer, especially when consideration is taken of the fact that there is much less vibration. In this type the volumetric efficiency is high (although by no means 100 per cent) and consequently, its actual displacement for handling a given volume of gas does not have to be as great as in the cheaper, high speed type.

The action of the piston in compressing the gas necessarily heats it to a very high temperature, as the work is all expended in friction. This temperature rises so high that it is necessary to cool the cylinder walls of the compressors, so that the pistons will not stick. This is accomplished by casting the cylinders

(Continued on page 31)

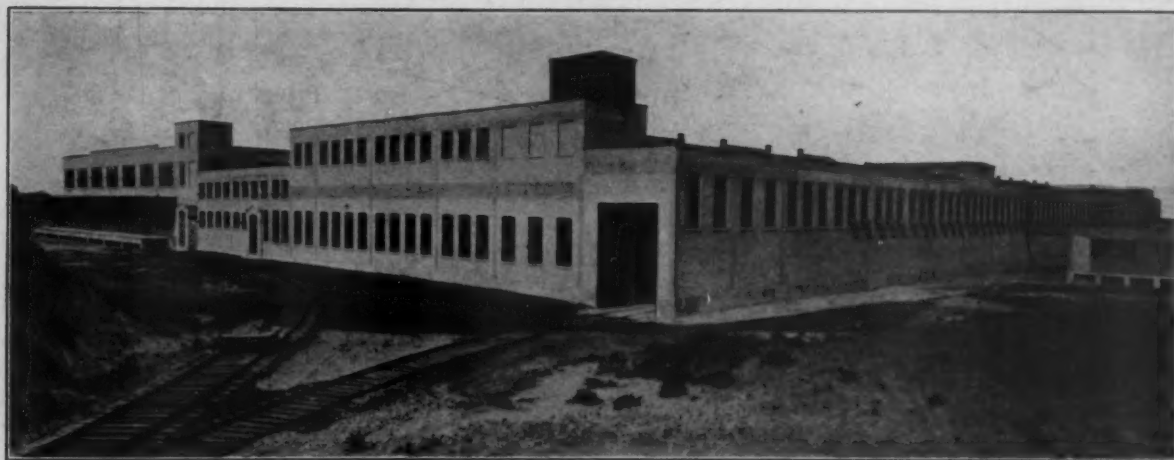
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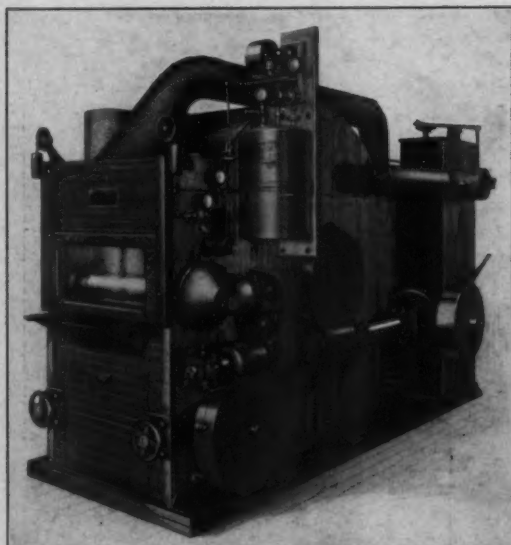
MILWAUKEE, WIS.

U.S. Gelatine is produced in the World's Largest Gelatine Factory, which means Uniformity, Purity, Strength at the Right Price. Stock used in the manufacture assures a bright, clean, odorless Gelatine.

□ □ □ LET US SEND YOU SAMPLES AND QUOTE ON YOUR REQUIREMENTS □ □ □

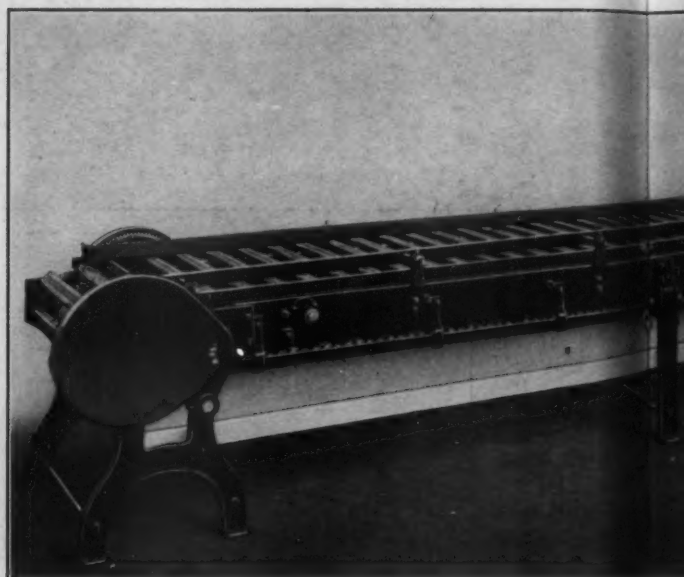
Chocolate Bar Machine

To make money in the chocolate bar business, use this N
These machines are the result of many years' e
This equipment is in use by most of the large



TEMPERING MACHINE

Prepares the chocolate for the depositor or moulding machine. Secures continuous, uniform temperature for large chocolate batches, with a great saving of time, labor and floor space.



SHAKING

Designed for operation in connection with any
a uniform leveling of chocolate in moulds and

*Write for complete details of each
always at the service of chocolate*

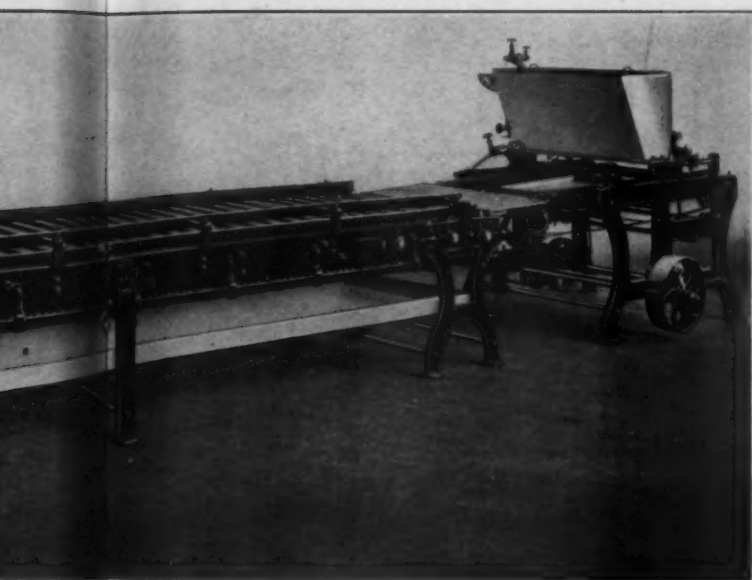
NATIONAL EQUIPMENT

Largest Manufacturer of Candy and Chocolate

SPRINGFIELD, MASS.

Moulding Equipment

s, use this National Equipment—which the money makers use.
y years' experience, and are perfected up to date.
the largest chocolate manufacturers in the world.



MAKING TABLE

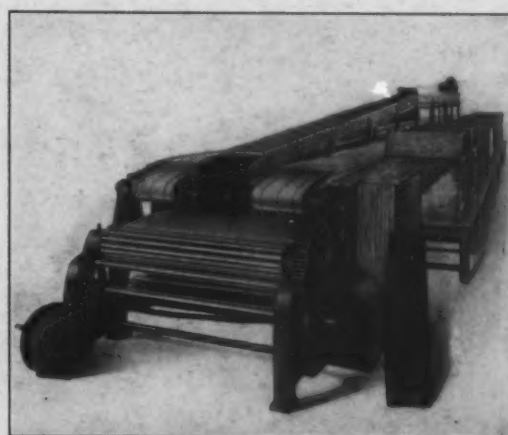
on with any of our Chocolate Depositors. It insures
moulds and eliminates bubbles in chocolate bars.

details of each unit. Our engineers are
of chocolate and candy manufacturers.

EQUIPMENT COMPANY

Candy and Chocolate Machinery in the World

U. S. A.

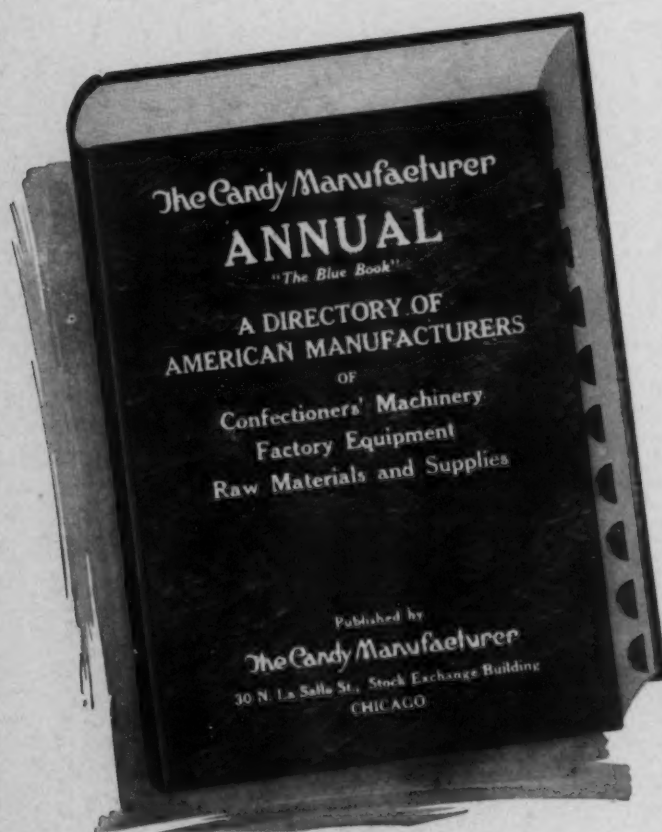


COLD BOX

Provides a constant temperature during the cooling process, which insures a uniform product, of superior quality and appearance. Has return conveyor for heating moulds.

Where to Buy Confectioners' Supplies and Equipment

While this book is being compiled we would be glad to receive inquiries from our subscribers regarding sources of supply or any problem in purchasing. All information in our Buyer's Directory files is at your disposal.



CONTENTS:

In addition to the Directory feature The Blue Book will contain:

An index of all associations, national, territorial, state and local within the confectionery industry, and the national associations in the allied industries.

Rulings, regulations and legislative situation affecting confectionery supplies and products. Statistical information on the industry. Reports and surveys of special value to the purchasing and sales departments.

A review of books, periodicals and technical literature on candy factory management, methods and materials and the industry in general.

A directory of trade names.

The data for this candy manufacturers' buying guide is being compiled and the book will be issued later in the year. In the meantime our subscribers have access to all information in our directory files. We will be glad to receive your inquiries regarding sources of supply.

The Directory Section

of the Blue Book will contain the following classifications:

Directory of manufacturers of chocolate and candy machinery, refrigerating machinery, factory equipment, tools and utensils.

Directory of manufacturers and importers of confectioner's colors, flavors, essential oils, gums, extracts and essences, gelatines, starch, corn syrup, molasses, honey, milk products and all raw materials.

Directory of manufacturers of chocolate coatings, liquors, and cocoa butter; cocoanut oils, butters and cocoa butter substitutes.

Directory of brokers and importers in cocoa beans, cocoanut, fruits, nuts, etc.

Directory of sugar brokers and refiners.

Directory of peanut brokers and growers and manufacturers of peanut machinery.

Directory of manufacturers of paper boxes, fancy, set-up and folding; candy containers—tin, glass, redwood, baskets, leather, etc.

Directory of manufacturers of paper box liners, laces, bonbon cups, seals, trimmings, etc., box papers and box tops.

Directory of manufacturers of box wraps, bar wraps, foils, waxed papers, dipping papers, bags and paper specialties.

Directory of manufacturers of shipping containers: corrugated, solid fibre and wood boxes, and pails.

Directory of lithographers and manufacturers of "Dealer Helps" and advertising specialties, window trims, store signs, display cards, hangers, premiums, souvenirs, etc., etc.

The Candy Manufacturer Publishing Co.

30 N. La Salle St., Stock Exchange Bldg.
CHICAGO

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Theories of Refrigeration

(Continued from page 26)

with water jackets and circulating the proper amount of cooling water in the annular space between the inner and outer shells.

The Condenser

The gas which is now compressed and is very hot is passed through pipes whose outsides are cooled by water. In these pipes, which in their aggregate are called a "condenser," the process of heating of the ammonia by the absorption of heat is reversed and the heat is transmitted from the hot ammonia gas through pipes to the cooling water. Obviously, in the condenser, there is the same pressure as the pressure at which the gas is discharged, less a certain amount for reduction in volume due to transforming the gas into a liquid. Under this pressure and with the heat extracted by the cooling water which ordinarily should not be under 70° or 75° F., the gas is condensed into a liquid and runs along the bottom of the pipes into a receiver.

The Atmospheric Type of Condenser

This condenser also takes several forms, the simplest being what is known as the "atmospheric" type, which is made up of stands of single pipes set one above the other and connected by return bends. The top of each stand of pipes is provided with a trough of sheet metal into which is brought a supply of the cooling water. This trough has a serrated edge, over which the water overflows down the outside of the trough to the top row of the pipes. Between the rows of pipes are strips which form, therefore, together with the surface of the pipes, a continuous surface down which the water runs quietly in the form of a film. The quantity of cooling water, the trough and the strips must be so arranged as to minimize splashing, as it is obvious that the more the water splashes the less work it will do, as only the water which comes in contact with the hot pipes will have any effect. This is the safest form of condenser to use when it is installed in an exposed position, as, during the winter, when the refrigerating system is not used and no water is supplied to the outside, there is nothing to freeze.

The Double Pipe Condenser

There is another form which is ordinarily used for inside location. This is a "double pipe" condenser. This is the same as the single pipe or atmospheric type, but is surrounded by another, a water pipe, forming an annular space between the pipes through which the cold water flows. Because the center travels at high velocity, it absorbs more heat per unit than the water used in the atmospheric type and as it can be seen, there is no possibility of splashing or wasting. If this type of condenser is in-

stalled on the outside of the building, it may not be possible to drain it properly and there is danger of freezing the water left in the annular space with consequent breakage, and either a dangerous or an expensive loss of ammonia.

The Flooded Type of Condenser

In order to obtain the greatest effect from the cooling water, all condensers should be of the flooded type exactly the same as the cooling pipes, and an accumulator of a similar type should be used. In this way, the heat is transmitted between two wet surfaces, thereby obtaining the highest possible transmission rate. This condenser, which is made up of a number of stands of pipes, is provided with gas valves, whereby the amount of gas passing into each stand can be regulated so that one stand will do only as much work as another. That this is a necessary adjustment will be seen immediately, as a stand which is overloaded with gas will very often not condense it entirely and the rest of the system is badly handicapped in its operation. Of course, also in the water ends, control valves are supplied, so that the flow of water may also be regulated.

Between the compressor and condenser there must be installed an oil separator, especially necessary in the enclosed type high speed machine which invariably uses a splash oiling system. A lot of oil is carried out with the gas and this must be taken out in order that the inner surface of the ammonia pipes may be kept clean and at their maximum transmission efficiency.

The "Receiver" Tank

The liquid ammonia from the condensers is then carried to a "receiver," which is a steel tank built to withstand the operating pressure. This pressure is at least 100 lbs. per square inch. This receiver should be large enough to hold the entire charge of liquid ammonia for filling the system. Besides the liquid inlet pipe, which is merely a tapping in the top of the tank, there is provided an outlet connection. This consists of a pipe with its inlet near the bottom of the tank, and fitted, outside the tank with what is known as a "King valve," or a valve which prevents ammonia from backing into the tank and controls the flow of liquid into the remainder of the system. The pressure in the high side of the system forces the liquid up through the discharge pipe through the King valve and to the accumulator on the cooling coils with a pressure of about 100 lbs. per sq. in. It is obvious that the liquid ammonia can be raised without any trouble to a height of at least 200 ft., so that it is possible to have the compressor and receiver in the basement of the building and use the liquid without pumping, on the top floor of the ordinary factory.

(To be continued)

Method of Making Invert Sugar

(Continued from page 21)

vertase is allowed to act and depending also upon the strength of the invertase solution.

Method of Making Invert Sugar, Using Invertase

Take 95 pounds of cane sugar and add 27 gallons of water and slightly acidify the solution with a small amount of acetic acid. Bring the temperature to 125 F. Add from one to two pints of invertase solution, depending upon the strength of the solution and any special directions of the manufacturer of the invertase. Maintain 125 F. temperature for about fifteen hours; if one possesses a vacuum pan the syrup can then be concentrated in the same.

Method of Making Invert Sugar, Using Hydrochloric Acid

This process is for the production of about four barrels of invert sugar. A wooden tank should be used for the inversion and under no circumstances should any metals which are attacked by muriatic acid be used in its interior. It should be provided with acid resisting steam coils and a mechanical stirring device.

Take 1,960 pounds of refined cane sugar and make a solution at 36 degrees Be. and transfer to the wooden inversion tank.

Bring the temperature up to 158 degrees F. and not above 160 degrees F.

Then add three pounds of pure hydrochloric acid of 1.19 specific gravity and heat with constant stirring at 158 degrees F. to 167 degrees F., but no higher, for one hour and twenty minutes.

At the end of this period add a concentrated solution of pure sodium carbonate containing 4.8 pounds of the dry sodium carbonate and stir thoroughly.

If your invert sugar is too yellow you may add a small quantity of sodium bi-sulphate to bleach it, but avoid an excess, as too much will bring you in conflict with the pure food law.

The union of the acid and sodium carbonate will give you common salt, but being present in such a small amount will not in any way interfere with the use of this product. After you have thoroughly stirred in the sodium carbonate, cool your product as quickly as possible. This method will enable you to produce a more completely inverted sugar than the average sugar offered to the confectioner.

If one has a vacuum pan this syrup can be concentrated to about 1.390 specific gravity, or about 11.6 pounds per gallon.

At this concentration the analysis should approximate the following:

Un-inverted	Inverted	Ash
Cane Sugar	Sugar	(Salt)
2.18	76.1	.05

"Prosperity" Trainload Shipment of Chocolate Containing Over a Million Pounds

One of the evidences of the present state of better business, is the fact that the Stollwerck Chocolate Company from their plant at Stamford, Conn., made shipment on July first of a trainload of 30 cars of chocolate to their various customers throughout the states.

They are justly proud of calling this the "Chocolate Prosperity Train," and as far as we know this is the first trainload shipment of chocolate made at any time in the history of the chocolate industry.

This trainload leaving the factory at Stamford, Conn., made a fine showing, the New Haven Railroad co-operating with the Stollwerck Chocolate Company in giving them all new cars, and on each car was a banner giving the name of the customer to whom the carload was being shipped.

This train moved over the Pennsylvania Railroad during daylight, so as to give the benefit of this unusual sight of a trainload of chocolate being shipped, to as many people as possible, through many of the principal eastern and western cities.

Twenty-eight of the thirty cars of chocolate were straight carload consignments to candy manufacturers throughout the central and western states.

Removal Notices

The Thomas W. Dunn Company, selling agents for Cox's pure food gelatin, have moved from their old stand where they have been for 18 years, 248 Front Street, New York City, to 546 Greenwich Street. They will occupy the entire six-story building, which has been remodeled for their use. President Rosenstein has been receiving congratulations on the artistic appearance, increased shipping and office space and better facilities of the new home.

California Central Creameries, Inc., have moved from 277 Broadway, New York City, into larger quarters at 175 Franklin Street, where they are occupying the entire six-story building.

Mitchell B. Stock Company, New Haven, Connecticut, have moved into their new plant at 140 State Street.

Metro Chocolate Company Expands

The Metro Chocolate Company, Inc., 122 Washington Ave., Brooklyn, N. Y., have issued additional stock in the amount of \$100,000, making a total capitalization of \$150,000. The new stock has been absorbed by J. Becker, F. Kodah, S. Fox, H. G. Altman, the present stockholders and directors of the company.

From Chemist to Salesman

Mr. G. B. Zimmele will represent the Ideal Cocoa & Chocolate Company in the sale of coatings and cocoas in New England and eastern New York state. Mr. Zimmele has been connected with the Ideal Cocoa & Chocolate Company for several years as chemist in their factory at Lititz, Penn.



II-Flavoring Extracts

by M. A. Posen

Chief Chemist, Schwarz Laboratories

To Superintendents: In our April issue was published a letter received from a manufacturing confectioner, stating his problem and some questions about flavors. This article is in response to the suggestion from our subscriber that we publish an authoritative article on essential oils, not too technical, which would give the layman a satisfactory understanding of this subject and help the practical confectioner who has not had technical training to buy and use flavors more intelligently.

The same corresponding viewpoint is behind all the technical articles of this magazine. If any statement is "over your head," please write in and let us clear up the point. We will appreciate letters from superintendents and practical men of our industry giving their comment on the articles published and a few suggestions of subjects to be included in our editorial program this year.—EDITOR.

IN view of their characteristic odors, essential oils are valuable agents in giving flavor to food products, making them palatable and thus favoring more ready digestion. Because of their concentration and physical properties, however, they are not used undiluted, but in the form of solution in a suitable solvent, or as emulsions or paste. The usual solvent is pure ethyl (grain) alcohol of proper strength, depending on the solubility and character of the oil.

United States Department of Agriculture, Circular No. 136, Standards of Purity for Food Products, defines a flavoring extract as "a solution in ethyl alcohol of proper strength of the sapid and odorous principles, derived from an aromatic plant, or parts of the plant, with or without its coloring matter, and conforms in name to the plant used in its preparation."

Some flavoring extracts are, therefore, made directly from the plant or part of the plant, as in the case of the extract of vanilla, ginger, lemon peel and orange peel, the solvent used extracting the oil or other flavoring principle from the plant tissues. In most cases, however, it is more convenient to dissolve the pure essential oil in the solvent, and a more uniform extract is produced thereby, since the oil content of plants varies.

The concentration of the alcohol used in the preparation of the various alcoholic extracts varies from 95 per cent down to 45 per cent or less in the case of some terpeneless extracts.

The minimum percentage, by volume, of oil required by the standards of the United States Department of Agriculture in flavoring extracts varies from 0.1 per cent in the case of Sweet Basil, 0.2 per cent in the case of thyme, 1 per cent in the case of almond and marjoram extracts, up to 5 per cent in the case of lemon and orange extracts. Terpeneless lemon ex-

tract is required to contain not less than 0.2 per cent citral. The standard for ginger extract requires the presence in 100 cubic centimeters of the alcohol-soluble matters from not less than 20 grains ginger, while vanilla extract must contain in 100 cubic centimeters the soluble matters from not less than 10 grams of vanilla bean. The presence of sugar and glycerin is permitted in the vanilla extract.

The flavoring extracts so far discussed are of the alcoholic type. The advent of prohibition with its attendant influence on the industrial alcohol question, has given rise to the production and marketing of non-alcoholic flavors. These are usually of the emulsion or paste type. They consist of essential oil or other flavoring material emulsified with the aid of a mucilage of some gum such as acacia, tragacanth or karaya and often contain glycerin, which acts not only as a fixative and a preservative, but also helps to give proper consistency to the product. Some rather fantastic claims have been made with reference to the flavoring strength of some of this type of flavoring.

While there are, as yet, no published standards for non-alcoholic flavors, the attitude of food law enforcement officials is that they must be true to name, that they must have a flavoring strength equal to that of the alcoholic flavor of the same name, or if not, the exact strength must be stated on the package. They must comply with the general requirements of the Food and Drugs Act with reference to foods. Some "non-alcoholic" flavors have been found to contain small proportions of alcohol. This is considered in the light of misbranding by food law enforcement authorities. Provided that he is sure of the extract flavoring strength of a non-alcoholic extract, as compared with the corresponding alcoholic flavor, the confectioner may find this type of extract useful where the presence of alcohol is objectionable or un-

Use
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PAPERS
Exclusive
Designs

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FOR SAMPLES
HAMPDEN GLAZED
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MASS.

suited to some particular product he is making. It is quite likely that a gum-glycerin paste will blend better and have a better effect on the consistency of certain cream and gum confections than an alcoholic product. The presence of a small amount of glycerine should prove beneficial in helping to prevent drying and cracking of some products.

The question of what to avoid in purchasing flavoring extracts has been touched on in the preceding section on essential oils which are, in most instances, the active ingredients of flavoring extracts. It is well to insist on a guarantee that the extracts comply with the government standard, or that the goods be accompanied by a certificate of analysis from a competent chemist who has examined the product.

Correspondents frequently inquire for simple and rapid methods for determining the quality of flavoring extracts. Aside from the physical examination which, in the hands of experts, gives some information of value, there are no quick and easy tests which will classify an extract as pure or adulterated. With the exception of the terpeneless extracts, dilution of an alcoholic oil-containing extract with an excess of water, produces a degree of cloudiness roughly proportional to the amount of oil present.

Whether a vanilla extract contains coumarin can sometimes be told, provided it is present in sufficient proportion, by the odor. A person skilled in examining flavors will note that the more pungent and penetrating odor of coumarin will predominate over the more delicate odor of vanillin when the two are present together. In other words, if the "vanilla" odor is unusually strong, look out for coumarin. When coumarin is added in moderate admixture with vanillin, or when vanillin alone is used in making a factitious extract, the nose test fails to detect the sophistication. It is claimed that the addition of a solution of lead acetate (sugar of lead) to a sample of vanilla extract will give some information as to its character. If no precipitate forms, the extract is considered artificial. A genuine vanilla extract should give a more or less heavy precipitate which settles fairly soon and leaves a clear, partly decolorized liquid above it. This test, while of some value in the hands of an experienced analyst, may prove misleading when performed by a person not familiar with the behavior of genuine extracts under the conditions of the test.

There is only one way for the purchaser or manufacturer to learn definitely and conclusively whether an extract is genuine or whether it is made up from coumarin, vanillin, sugar, glycerin, alcohol, water and color, or from exhausted beans; or in the case of a genuine extract, to learn whether it is full strength and complies with the requirements of federal, state, municipal or other standards, and that way is

to submit a sample of the suspected extract to a competent and reputable chemist for analysis.

A case in point is that of a large manufacturer who had a contract with a certain municipal department to deliver a larger order of vanilla extract. It so happened that this particular department had certain specifications for vanilla extract, including a rather stringent requirement as to the content of vanilla resins. The manufacturer, a man of long experience, knew that his vanilla extract was a high-grade product, made from first-class beans and of the proper alcoholic strength, but knowing the variation in the resin content of vanilla beans, he was uncertain as to whether his extract would meet the strict requirements of his prospective customer, and he feared a rejection, with its accompanying annoyance delay, expense and unpleasant publicity. He consequently submitted a sample of his extract to this laboratory and we found that the sample, while a pure vanilla extract, did not meet the strict specifications for vanilla resins. The results were reported to the manufacturer, who thereupon submitted a sample from another lot of extract, which our analysis showed to contain sufficient resins to meet the requirements. The manufacturer then delivered this lot of extract to the city department and it was accepted after inspection by their laboratory. The value of the chemists' service to the dealer or manufacturer as detailed above, is demonstrated every day in many other ways.

Taste vs. Appearance in Candy

(Continued from page 20)

actual words of one candy manufacturer. Doubtless this is true, but it is one of the unfortunate conditions of the times. Perhaps it can't be helped, but nevertheless it is an unfortunate condition. Where fifty per cent of the actual cost of the package to the retailer is in the box itself, the candy is a minor consideration.

Return to common sense is evident in the thriving business done by many retailers who put up in inexpensive containers selections of candy made by the purchaser. This places quality first and the fancy box last, which should be the relative standing of the two.

And finally, if the candy is made to look more appetizing than it really is, if appearance is made the chief aim and quality a minor consideration, the unavoidable result will be a gradual falling away in candy consumption on the part of the discriminating purchaser, or he will learn where he can get both quality and appearance.

AMORA FLAVORS

"The Essence of good taste"

At last—

An emulsion type true-fruit flavor which positively will not separate or decompose.

Non-alcoholic flavors which are actually soluble in the batch, thus insuring an even distribution of the flavoring with a minimum of manipulation, and the development of this flavor to the highest degree obtainable.

HOMOSOL flavors are fixed. They will not cook or freeze out.

HOMOSOLS will confer upon confectionery, ices, fountain syrups, etc., a "true-fruit" flavor of remarkable freshness and fidelity in as small a proportion as 1 ounce to a 100-pound batch.

HOMOSOLS are guaranteed by the manufacturers to conform to the requirements of the Federal and all State Pure Food Laws.

Amora Flavors have stood the most searching tests and have met the most exacting requirements of the largest and foremost manufacturing confectioners of this country. Let us send you a trial order.



Send for this literature about Flavors.

Also price list on "Homosols" and our Non-Alcoholic Extracts.

Special and Individual Flavors Manufactured to Order

THE AMORA LABORATORIES

Manufacturing Chemists
112 FRONT STREET NEW YORK CITY



UNIFORMITY of VANILLIN

FLAKY, white crystals, readily soluble in alcohol and soluble in glycerine. An ash content of not more than 0.05% and a melting point of 81° and over.—this, briefly covers the specifications of VANILLIN-Monsanto.

These specifications may sound uninvolved, but the utmost manufacturing skill is necessary to have each succeeding batch of VANILLIN identical when it is produced on an extensive scale.

Only after years of earnest, scientific effort were we able to accomplish this uniformity in our finished product, which is so highly desirable to the users of this important flavor.

Each lot that is marketed by us must measure up to the exacting standards which we adopted years ago.

Freedom from off-color (yellow color) and a melting point one full degree above the requirements of the United States Pharmacopoeia assure full strength, highest purity and true flavor.

Monsanto Chemical Works
ST. LOUIS, U.S.A.

Also Manufacturers of
COUMARIN-Monsanto
(The Original American Coumarin)

Stocks of VANILLIN-Monsanto are carried at St. Louis, New York, Chicago, Minneapolis, San Francisco and Los Angeles. Thus VANILLIN-Monsanto at all times is easily available to the consuming trade.

VANILLIN-Monsanto is Uniform!



Everybody Likes Candy

(Continued from page 17)

ample, supposing we used the slogan, "Everybody Likes Candy," without the hand or the word "Remember," it would be just the same as using "Everybody Loves Flowers." There is no suggestion in such a slogan, but when you put in the word "Remember" or the hand symbolic of the word "Remember," then you put in the suggestion which means gifts and uses.

Must Have Dealer Co-operation

It is appreciated by the manufacturers that to get this slogan into the hands of retailers and to get the co-operation of retailers is the most important factor in the beginning of a national advertising campaign of the industry. It is the intention of the Publicity Department of the Association to provide manufacturers with counter cards and other advertising matter in regard to the slogan and it is the intention that the manufacturer should furnish same to the retailer, but it would help a great deal if retailers would write to the manufacturers and jobbers from whom they buy and ask for advertising matter in respect to the slogan and also tell the salesmen about it when they call. A display of interest on the part of the retailer will mean that the manufacturer and jobber will get behind the Publicity Department much more effectively.

The purposes of the national advertising campaign by the industry are fundamentally to help the retailer to sell more candy, to provide him with means of doing it in the way of advertising and to help him in effective methods of display, pricing, special sales and window advertising.

It is realized by manufacturers and jobbers that their source of distribution to the consumer is the retailer and that the retailer is the essential factor in increasing the demand for candy.

The National Confectioners' Association wants everybody to use the slogan and are going to do everything that it can to provide them with the means.

Various articles on the national advertising campaign by the candy industry will appear in subsequent issues of THE CANDY MANUFACTURER which we hope will be followed closely, so that all manufacturers in our industry will keep posted on the progress and plans of the campaign.

When you hear a man boast, "I say just what I think"—just put it down that he doesn't think.—Coleman Cox.



Gelatin—Testing and Grading

(Continued from page 23)

ing point (35° C.), differentiates the gelatins in the order of their gelatin content.

In measuring the jelly consistency a number of arbitrarily selected "standard" gelatins of varying jelly value are at hand, and the consistency of the jellies of the gelatins being graded are compared with that of the standard jellies which have been made up at the same time and by the same treatment as the samples. Any convenient concentration and volume, as 200 c. c. of a 5 per cent concentration, are prepared by soaking in cold water till fully swollen, warming to about 60° C. to effect solution, and allowing to stand at about 10 to 15° C. for 8 to 12 hours to set. The jellies may then be compared by pressing the finger on the surfaces, or by some instrument as those described by The Forest Products Laboratory¹ or by S. E. Sheppard.²

The water content of gelatins varies greatly, both from the ability of gelatin to hold more water than proteose, peptone, etc., and from fluctuations in the humidity and temperature of their environment. For this reason, the water content should be determined first, and the tests for jelly consistency and viscosity figured on the dry basis. The water content is most satisfactorily determined by weighing out 5 or 10 grams of gelatine into a 4-inch aluminum dish, bringing into solution with a small amount of distilled water, and drying to constant weight at 110° C. This procedure, suggested by Sheppard, eliminates the difficulties due to irregular grain size and changes in water content during grinding.

Other Tests

The other tests that are made on gelatins are usually of only secondary importance. These include a test for the reaction of the material. This is sometimes made by dipping into the solution a strip of neutral litmus paper. If this turns blue, an alkaline solution is indicated; if it turns pink, an acid solution is indicated. A better test would be the determination of hydrogen ion concentration by means of a number of indicators or by electrometric methods.⁴

A foam test, or a beating test, is often made by beating a solution of the gelatin in water and noting either the total volume which the mixture swells, or the volume of the foam upon the surface.

The clarity and color may be graded by inspection upon a comparison with samples of "standard" clarity or opacity or color, or by means of optical devices as described by Sheppard.⁵

1. Technical Note No. F. 32 (1919).
2. J. Ind. Eng. Chem., 12 (1920), 1007.
3. R. H. Bogue, J. Ind. Eng. Chem., 14 (1922).
4. See R. H. Bogue, loc. cit.
5. "Monograph on Gelatin," 1922.

For Better Marshmallows

It is the unvarying goodness of quality of Essex Gelatine that helps to build enviable reputation for the marshmallow manufacturer using it. It is this absolute uniformity that makes it possible for the manufacturer to make a marshmallow of fine grain and soft texture and to stand back of his product. It is for these reasons that Essex Gelatine is used to-day by prominent and successful manufacturers.

Shipments can be made from warehouses in Boston, New York, Philadelphia, Chicago, St. Louis and San Francisco.



ESSEX GELATINE COMPANY

MANUFACTURERS

40 North Market Street
BOSTON, MASS.

BOSTON NEW YORK PHILADELPHIA
CHICAGO ST. LOUIS
SAN FRANCISCO



A Chocolate Factory
devoted to the
exclusive manufacture of
High Grade Chocolate
Coatings and Liquors

*Samples and Prices
sent on request*

FORTUNE PRODUCTS CO.
416-22 South Desplaines Street
CHICAGO

The New York Sugar Market

July 1st, 1922.

The raw sugar market has taken on a firmer feeling with again a sale of Cuba sugars at $3\frac{1}{2}$ c C. & F., these for August shipment. This upward tendency follows sales of small quantities at the low price of $3\frac{1}{2}$ c C. & F. at which time considerable sales were made of sugars from store at prevailing duty paid price delivered at refineries, followed by sale of afloat sugars at $3\frac{3}{16}$ c C. & F. The bulk of the Cuba sugars available is held at $3\frac{1}{2}$ c C. & F. and it is believed refiners could not secure more than 100,000 bags at this price. The F. O. B. Cuba market is quiet with last sales at 3.10c net F. O. B. Cuba and holders asking 3.15c. Last sale of Cubas to the U. K. was at $16\frac{1}{8}$ d. C. I. F. per cwt. Further rumored sale of Domingos at $16\frac{1}{9}$ d. A small lot of Haytiens has sold to a Canadian refiner at 3.05c F. O. B. Hayti. The market closes for the week, over the holidays, firm with upward tendency.

The refined sugar export market has firmed up to 4.35c F. A. S. the asking price of second hand holders who have practically all the July shipment sugars in their hands. Buyers have paid 4.325c and are bidding this for more July. August export granulated is firmly held by refiners at 4.35c F. A. S. with only moderate demand so far, but which is expected to increase after the holidays. A good business is expected at 4.35c for August if the price is not further increased. September shipment is not obtainable, refiners refusing to sell that far ahead as yet.

The domestic refined market remains firm with unchanged prices of 6.20c for all refiners except the Federal, who is quoting 6.30c for a limited amount of prompt shipment. Most refiners are from three to five weeks delayed in shipment. The possible railroad strike has not been taken seriously, although it could become a very important factor in deliveries if it comes to pass. The demand continues good for prompt and July shipment. The demand for this position cannot be filled.

The domestic beet quotations are practically nominal, the chief source of supply being cane refined from the Atlantic seaboard. West of the Mississippi buyers are depending upon the remaining beet supply, the West Coast cane refiners being still withdrawn East of the Rockies.

The market is firm with upward tendency, temporary lulls having no effect upon refined prices and affecting raw prices only to a very limited extent.



The Sugar Situation



by Dwight O. Palmer

THE sugar situation as a whole remains unchanged from our last review. With slight variations the entire situation became stronger during June, confirming our opinion previously expressed, and has been reflected in the advance in sugar prices to the highest point thus far this year. Raw sugars reached the high level of 4.86c, duty paid, and refined sugar, 6.20 to 6.30c.

We have experienced two quiet and easing periods during the month, of but a few days' duration each, the advance to the high level occurring between these two periods. Throughout these periods of quiet, at no time were sugars pressed for sale in any quantity in any market, due to the strong statistical position of sugar and consequent reluctance of sellers to follow prices downward. The position of sugar is fundamentally sound and needs no artificial stimulation to maintain its present level, which has been brought about by natural causes. During the periods of advancing prices the largest volume of business was booked so that the sugar market has at all times been well sold ahead and sellers have been able to maintain their position during periods of quiet and easing tendencies, particularly so as practically all sugar sold has gone directly into consumption or direct distributing channels, very little sugar coming out for resale. The foreign demand for sugar has eased off temporarily, but the domestic demand has taken its place with considerable additional impetus, due to the withdrawal of the West Coast cane refiners from markets east of the Rocky Mountains on June 19th.

The situation is again taking on a firmer tendency and buyers will again be obliged to take on further supplies at the high level and further advances are quite probable within the near future.

In considering further advances

in the price of sugar, at a time when there is no actual shortage in world's supplies, holders of sugar, particularly raws, on the western hemisphere, excluding Peru and Brazil, cannot ignore the natural drawing power of higher prices on sugars from other parts of the world. While this year's supply is apparently needed, due to the increased consumption, sugars will seek the highest market and will in time come to that market in sufficient volume to equalize prices, so that we will not have continual sensational advances. Sellers must realize that they will be obliged to meet the world's markets if they wish to dispose of their product within reasonable crop time limits. The present price of sugar has already induced increased competition of sugars from distant countries, particularly to European markets.

There are many features of importance bearing on the future of the sugar situation and they may well be considered by sellers and buyers alike.

We have had an exceptional demand for raw and refined sugars from all parts of the world that have been able to pay for the sugar required. Europe has been a heavy buyer throughout the year, taking sufficient supplies of raw and refined sugar from the United States market to contribute materially to the strong situation we have today. Europe no doubt will return for further supplies, refined sugar for the next two or three months and raws to England for the balance of the year, but the possibilities are unknown at this time, owing to the uncertainties of the European Beet crop and the uncertain ability of European countries to absorb further important supplies of imported sugar.

Exchange rates are important factors, foreign buyers in countries of prevailing extreme currency depreciation hesitating at the prospects

of expensive operations in sugar with very limited profit as well as difficulty in distributing sugar at its increased price. England is best situated for this business, due to the better rate of exchange enjoyed by the pound sterling over other foreign sugar-purchasing countries. The English market is most important both for English consumption and resale to European countries. These markets have been rather dull recently, due to heavy earlier purchases and remaining shipments not disposed of as yet. Supplies must find ultimate buyers for consumption before buying can be resumed. We have other foreign sugars, principally Javas, offering in certain markets on a competitive basis in a limited way, but higher prices might easily bring out more sugar.

All factors considered, there seems to be sufficient evidence that world's prices will be equalized.

The world sugar situation is well considered by all countries, particularly buying countries and to date have not been stampeded but have maintained a consistent business-like attitude toward sugar. This, western hemisphere sellers must thoroughly consider before any attempt is made to urge sugar prices upward beyond levels warranted by the world situation.

The uncertainties of the situation seem to offset the possibilities of an extremely high market, but the statistical strength of the situation warrants steady to firm prices at about present level for the balance of the year.

Cuba has the local U. S. situation pretty well in hand and will have until the other raw supplies come into the U. S. domestic market, such as Hawaiians, Louisianas and U. S. beet. Twenty-four centrals continue grinding in Cuba. According to Willet & Gray the total production in Cuba to June 29th was 3,595,103 tons. Total stock in Cuba, 1,334,223 tons. Total

stock in all U. S. refining ports and Cuban shipping ports, 1,201,040 tons, or a decrease from last year of 474,930 tons.

The unsold balance of the Cuba crop is estimated at about 1,300,000 tons.

U. S. domestic sugars cannot be expected to become available for consumption in important quantities until late September/October. Meantime beet sugar quotations are but nominal.

The fruit crop prospects continue very good.

A domestic upset feature is the possibility of a railroad strike and consequent interference with sugar deliveries from the Atlantic Coast to interior points.

Consumptive demand for sugar continues good in all countries. Any increase likely in this year's production is offset by the increased consumption.

The domestic difficulty is in obtaining prompt delivery of sugars already purchased as well as of sugar which buyers stand ready to take if prompt shipment could be obtained.

The situation is firm with indications of continued firm markets for several weeks, future developments to determine the situation for the last three months of the year.

Imported Nut Situation

JORDANS: Buyers should beware of worm-cut almonds arriving at this time. A shipment of Jordan Almonds just received, are found to be slightly infested with worms and excreta. These goods will be reconditioned, but it shows that merchandise placed in cold storage warehouses at the proper time, to be drawn on for the summer, will give much more satisfaction. In regard to stocks, there are negligible amounts of extra large fancy goods. The medium and three crowns of standard pack are in small compass in this market.

JORDANETTES: Large and small hand-picked can be bought at a reasonable price. The large goods run about 18/20 to the ounce, and the small size about 27/28 to the ounce. The count indicates the size.

VALENCIAS: Three crowns, known as "Bull" brand, are exhausted. There are some few two crowns obtainable. Some "Bull Dog" brand Valencia Almonds are afloat and nearing port. This will probably be about the last shipment from source during the hot weather. Valencia style (which is an imitation of the real Valencia) is now available. This market is naturally firm, as what

there is left of the available crop is being held on this side.

BAG ALMONDS are steady and in fair supply.

FILBERTS are holding firm with a seasonable demand.

WALNUTS: Heavy parcels of French Walnuts, bought at high prices in the early season and which were not unloaded, have resulted in a continuance of weakened market conditions. There are practically no more fancy walnuts on the other side. There are, no doubt, several thousand cases of exotic walnuts in France which are still held by the unscrupulous shippers who pack and ship them out as native goods. The Dried Fruit and Nut Association of New York have had specific complaints of shipments of misbranded goods. They have also had arbitrations and the experts have declared against the shippers, it having been shown that the walnuts were not French goods. These complaints are being crystallized to the point where it is hoped that it will be possible to stamp out this evil so that it will be unprofitable to continue these swindling operations which reached such large proportions this season.

CHABERTE AND BORDEAUX WALNUTS: We again admonish the buyer to be particularly careful with respect to the walnuts which he purchases. The Chaberte Halves should be of good color and of light weight and dainty. They are not high in natural oil. They are especially used for topping, bon-bon or any other piece that requires such work. The Chaberte Walnut comes from a certain well-defined district in France. They are the product of the Dauphine, comprising four departments. Bordeaux Walnuts contain more oil and the regular goods are on the average slightly larger than Chabertes, although small Bordeaux Walnuts are very dainty and probably equal in every way to the Chabertes. The Bordeaux Walnut is a product of the Perigord (Dordogne, Lot) District, and the Departments Correze, Aveyron, Charente, Allier and Vienne, so the quality, appearance and technique of genuine French Walnuts is established. They are easily recognized by the experts, and any attempt to pack Roumanian, Bulgarian or any other foreign walnut under the brand of French product should not flourish very long, if the buyers of walnuts in this country in placing their orders with responsible houses will give close study to the general contour and appearance and other characteristics of real French Walnuts.

ROUMANIAN WALNUTS: Roumanian Walnuts, like Turkish and many other exotic goods which are found in the Balkan states in the near east, have the common characteristic of being coarse in appearance and lacking in daintiness of flavor. They carry a high percentage of natural oil and although these goods can be used to very good advantage where they are indicated, they deteriorate very rapidly with the seasoning influences of age. They become oil-bloated and finally the oil becomes rancid in taste. It may be said that this will happen to all walnut kernels after they have become old if not properly taken care of. This is true, but the French Walnut, having a lower percentage of oil, "stands up" and holds its flavor much longer than the exotic walnut.

The Fall Market Outlook

Just at present, it is hard to indicate the line of the walnut market this fall. There is a large quantity of walnuts held by the importers here and if shipments of fresh-cracked walnuts from the other side should come in in volume, it is possible that the holdings now held here in cold storage will be offered at low prices. Please note that the term "fresh-cracked" does not mean *new crop*. Fresh-cracked goods are simply walnuts that have been kept in the shell and carried over until fall to be cracked and shipped in the interim that spans the end of the present crop and the opening of the new crop, which means these goods are shipped in late September and are available in October and November. The new crop goods should be here late November or early December, more likely the latter date. If there are no large quantities of fresh-cracked walnuts to be shipped this year, the cold storage holdings carried over by the importers here should find a large outlet.

Over the shelled walnut and shelled almond situation we have the shadow of the impending tariff, which sooner or later will have to be reckoned with. However, we are approaching the quiet season and the solution of the shelled nut problem is not urgent. What the autumn conditions will be are not now clearly indicated. But, the general program will shape itself as we approach the fall season and a definite policy with respect to market conditions will be established.

A Service

Our subscribers are invited to make known to the service department of THE CANDY MANUFACTURER your problems or questions regarding any phase of the manufacture of chocolate, whether it be information regarding markets, or the qualities and properties of the beans, or questions about methods and machinery for the chocolate department. Your inquiries will be handled direct and treated confidentially if requested.—Editor.

Emil Pick's Column Mostly About Cocoa Beans

THE condition of the cocoa market for the past six months has been a very puzzling one, due to the fact that Europe has been quite a factor in primary ports. The consumption of Germany for the first three months, as near as we can check up, was 40,000 tons, and taking fifteen bags to the ton, we estimate about 600,000 bags and up to date Germany's consumption has been close on to 850,000 bags for the past six months.

The statistical position of the United States for 1922, from January 1st to May 31st, is 1,285,674 bags, which shows our country is still the largest consumer of cocoa beans in the world.

Competition in cocoa butter in this country is very keen, due to the large volume of cheap coatings and liquors being sold, and we believe that the consumption in Germany for the first six months being so large was due to the fact that they had sold close to 7,000-8,000 tons of cocoa butter to be delivered to the United States from the first of January to the end of June.

Had this not been the case we fully believe that cocoa beans would have receded to a pretty low level in price for the first six months of this year.

Another thing to be taken into consideration was the Eskimo pie business, which was very large during the months of November, December, January and February. This was a large factor in causing the high price in cocoa butter, as ten per cent more butter had to be added to the coating to make this Eskimo pie.

Due to the Eskimo pie, the consumption in Europe increased to supply the cocoa butter here, and furthermore, another thing that must be borne in mind is that Europe is selling its cocoa powder at from three to four cents a pound more than what the American manufacturers can get in bulk.

In the cocoa bean trade there is always the element who continually send out bearish reports, and who

are selling the market short, and this has been going on right along, due to some crop conditions that are reported to be small, and have been reported to the trade.

European reports, and what information we can get from primary countries, are that the only crop that is short, is Trinidad. The Bahia crop, which was estimated at from 400,000 to 500,000 bags last year, is reported to be a good average crop and estimated between 800,000 to 900,000 bags this year. The Guayaquil crop is going to be a large one. We have not yet received exact figures, but from reports they have shown there has been an increase every month this year of about thirty-three and one-half per cent. The Acera crop has been a large and a good one, and reports are that the intermediary crop is going to be a good one.

The spot stocks in New York are ample on some grades, but certain jobbers and dealers are picking up what cheap cocoa they can and holding same in anticipation of an advance in the fall. The reason for these advances and declines on certain grades are due to short covering, and in some grades we would not be at all surprised to see within thirty days an advance of a cent a pound, due to short covering. This is just our idea of conditions.

Manufacturers should check up their position in regard to certain grades of cheap cocoa they are using. We would strongly advise manufacturers to go into, and consider F. A. Q. Acera, which sooner or later will be a strong competitor of Sanchez. The reason that we mention this is that the F. A. Q. Acera we have been receiving for years has been very poor quality, but up to the last year some of the F. A. Q. Acera or F. A. Q. Lagos has been running so fine, that manufacturers should pay particular attention to the difference between this, Sanchez and Fair Bahia, which at times runs from $\frac{1}{4}c$ to $\frac{1}{2}c$.

We are only stating these facts to give you an outline for fall requirements, as we are not long, we are not short, and we have no interest in cocoa, but these facts should be taken into consideration.

Errata

In last issue in this column was published an outline for a proposed form of standard cocoa bean contract. The third paragraph should have read "no rejections but cocoa to be taken as a delivery and a fair allowance to be made," instead of "no arbitration," etc. We would be glad to have some comment on the matter of standard contract from the buyers and users of cocoa beans.

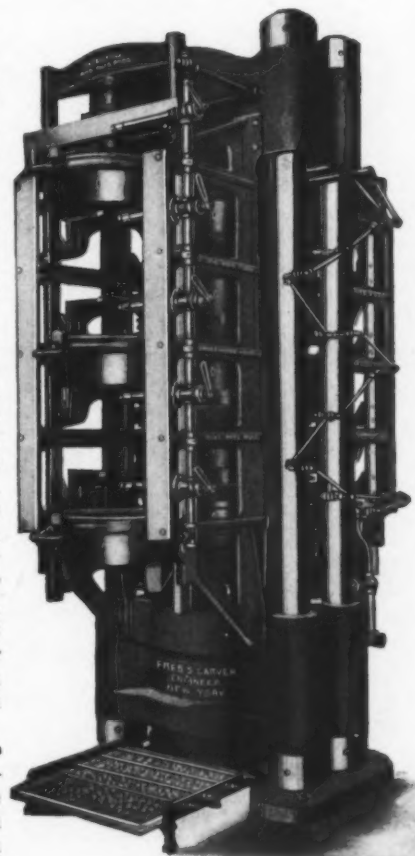
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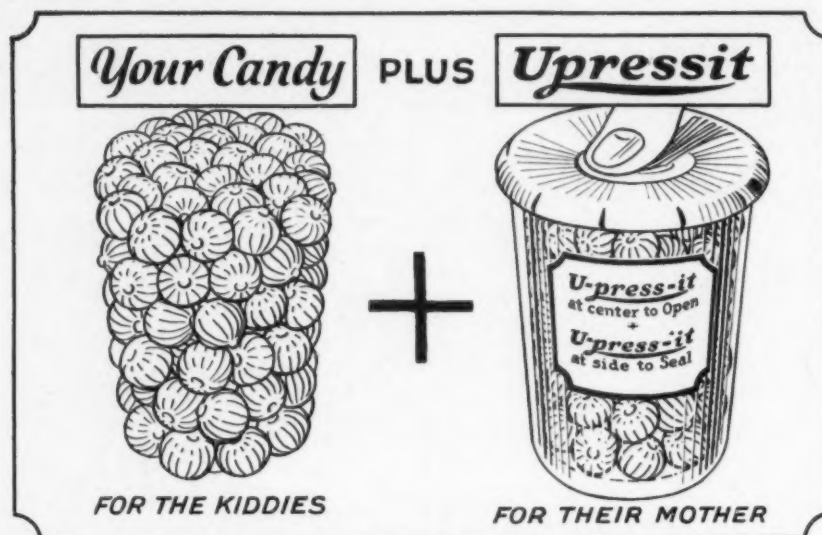
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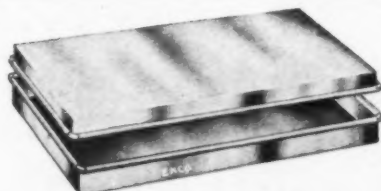


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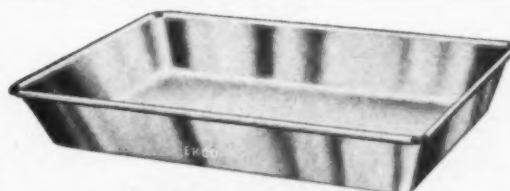
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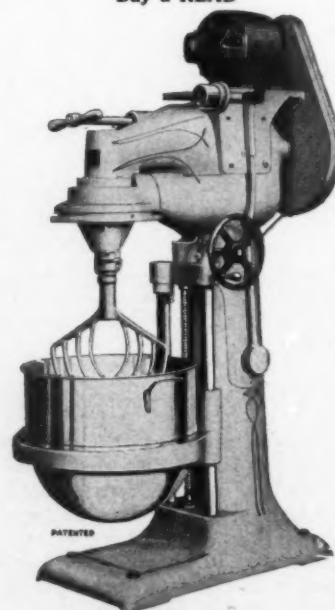
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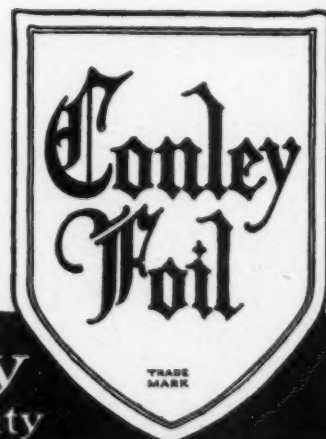
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You can hold your trade with "quality," but cut "quality" and you lose trade, and with it goes that "good name" that took so long to become established.

The profit lost, trying to "maintain quality," with your selling price going down, and your costs stationary or rising, may often be checked by a change in method of production—Our booklet—

Making Better Candy for Less Money

has helped many solve the problem of lowering prices and rising costs. It may help you. Your name on a postal will bring you a free copy.

IMPROVED APPLIANCE CO.
417 Kent Ave. BROOKLYN, N. Y.



Four Reasons Why

You benefit
by using

cXc Lemon cXc Orange
cXc Limes cXc Pomelo
(Grapefruit)

1. Quality—Natural Fruit Flavors
2. Concentration—Economy
3. Uniformity—Always Good
4. Price—Profits

Interesting information on request

FOOTE & JENKS

Expert Flavor Specialists
JACKSON, MICH.

Duché's Pure Food Gelatine

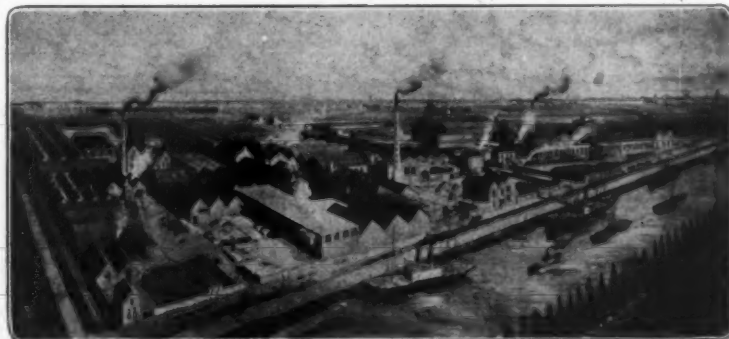
Not the Cheapest—Not the Dearest—BUT THE BEST!

Purity, Strength and Uniformity Guaranteed

Established 1857

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BUTTER
EGG
ALBUMEN
GLACÉ
FRUITS
MILK
POWDER
MAPLE
SUGAR



Plant in Belgium where PURE FOOD GELATINE is manufactured

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CHERRIES
GUM
ARABIC
CEYLON
COCOANUT
CANNED
FRUITS
JAPANESE
GELATINE

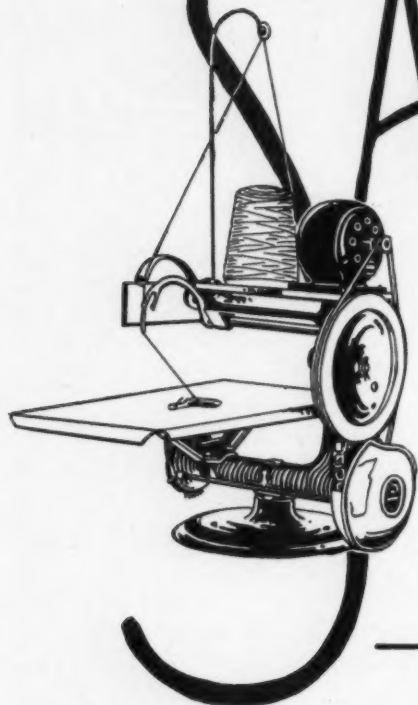
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LOS ANGELES
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CHICAGO
CLEVELAND

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GRIMBERGHE } BELGIUM
AVELLANEDA, BUENOS AYRES

SAXMAYER



**A Machine Installed
Is Money Saved—**

To Say Nothing of the Convenience

Candy Manufacturers who are using the Saxmayer Bundle Tyers say they could not get along without them.

Here Is Our Free Trial Offer

We will ship this machine to you on 10 days' trial and if you don't find it one of the most profitable investments you ever made—return the machine.

Simple to operate—Just attach to an ordinary light switch. Requires no experience to get excellent results.

Write for complete information.

National Bundle Tyer Co.

Blissfield, Mich.

For Both the Usual and the Exceptional

Our special cane sugars for confectioners answer every need from the usual to the exceptional. The high boiling point of some of our grades is especially valuable in making candies of exceptional quality.

American Sugar Refining Company

The Most Complete Line of Sugar in the World



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Help Wanted, Situations Wanted, Salesmen Wanted, Machinery and Equipment
Wanted and For Sale, Etc., Etc.

RATES: 25c per line; \$1.00 minimum. Forms close on first of month.

MACHINERY FOR SALE

FOR SALE—1 MODEL K KISS-WRAP-
ping Machine; 1 Model F Ideal Car-
amel-Wrapping Machine, $\frac{3}{4}$ x $\frac{3}{4}$ x $\frac{3}{4}$ to
 $\frac{3}{4}$; 1 Lozenge Machine (Lowe & Duff);
1 Lozenge Machine (Valley City Ma-
chine Co.); 1 Lozenge Cleaner; 1 Loz-
enge Feeder; 1 Imperial Day Mixer,
Capacity $1\frac{1}{2}$ bbls.; 6,000 Lozenge
Boards, 25 x 35; 40 Dolly Trucks, 25 x
35; 2 Werner Cream Coolers; 1 Na-
tional Equipment Company Packing
Table; 20 Slabs, Rock, Gas Pipe
Stands; 50 Sets Mills Drop Rollers,
2 x 3 $\frac{3}{4}$; 11 Sets Mills Drop Rollers,
2 $\frac{1}{2}$ x 7; 5 Copper Kettles with Handles;
10 Copper Steam Jacketed Kettles, 18,
20 and 22-inch Diameter; 1 Burkhard
Kettle, Inside Colls, Bottom Drawoff,
60 Gal.; 1 Savage Bros. Steam Jacketed
Stirring Kettle, Bottom Drawoff, 75
Gal.; 1 Steam Jacketed Stirring Tilt-
ing Kettle, No Stirrer; 1 Savage Bros.
Stirring Tilted Kettle, 60 Gal.; 1
Racine Buttercup Machine; 1 Car-
amel Sizer; 1 Cream Double Depos-
itor (Conf. Machine Co.); 1 Coconut
Ball Machine (J. L. Causey); 2 Steel
Folding Buttercup Cutters, 33 in. Long;
1 Westerman Cream Beater; 1 Racine
Candy Starcher; 12,000 Starch Trays,
15 x 31; 400 Dolly Trucks, 15 x 31;
1 Stick Candy Sealing Machine (Old
Colony Machine Co.); 1 Saxmayer Tyer.
National Biscuit Company, 224 Main
St., St. Joseph, Mo.

FOR SALE—D E M P S E Y MODEL 3
Chocolate Cooling and Dipping Table
with two electric heaters. Never been
used. Empire Candy Company, Macon,
Ga.

FOR SALE—MACHINES, ALL IN
good working order: Springfield
Coating Machine, Kilgren system, auto-
matic feeder; Complete Refrigerating
Plant; Horizontal Engine; No. 3 All-
Steel Baling Press; Copper Steam
Jacket Kettles, with and without power
agitators; Chocolate Melters; Mogul-
Racine Starch Sifters; Dough Mixer—
Werner Syrup Cooler; Empire No. 1
Starch Cleaner, 38-in. Holmberg Re-
volving Pan; Savage Marshmallow Beat-
ers; 36 and 96 Water Cooling Steel
Slabs; Marble Slabs, Egg Beater—
Sample Cases; Iron Plate Heating
Tables; Fancy Braid Machine; Lump
Cutting Machine; Square Stick Ma-
chine; Blowers; Saxmayer Bundle Tyer;
Advance All-nickel Silver Gelatine Dis-
solver; Addressograph—International
Time Clock; Scales; Fudge Boards and
Rack; Starch Boards; Chocolate Dip-
ping Boards for Enrobers; Tanks;
Cream Tubs; Transmission—Trucks—
Tools. What are you interested in?
Write us, as we have a lot of items not
listed. Royal Candy Co., 1017 Cly-
bourn st., Milwaukee, Wis.

FOR SALE—SIMPLEX STEAM COOK-
er, used five months; like new, bargain.
Address G246, c/o The Candy
Manufacturer.

MACHINERY FOR SALE—Cont.

FOR SALE—1 ONLY 5-FT. DAYTON
Cream Beater; 1 Elko Gas Furnace,
No. 33; 1 Racine Depositor; 1 Bbl.
Marshmallow Beater; 1 Peanut Blanch-
er; 1 Champion Crimper, No. 35; 1
Mills Improved Drop Front, 3 Sets Roll-
ers; 1 Knott Kiss Machine; 1 50-gal.
Copper Jacket Stirring Kettle; 1 New
Era Dough Mixer. W. W. Wholesale
Company, Pocatello, Idaho.

FOR SALE—2 PRACTICALLY NEW
EKCO gas furnaces, No. 33. Con-
gress Candy Company, Inc., Houston,
Texas.

FOR SALE—ONE REX CREAM CEN-
ter maker with one dozen Millex trays.
Machine used only two months. In per-
fect condition. Price \$100.00. Syl-
vester-Nichols Company, Little Falls,
Minn.

FOR SALE—TWO MILLS NUMBER 6
Sheet Steel Stoves, Figure 502; have
been used only a short time; may be
used with coal or coke. Emmerling
Brothers, Johnstown, Penn.

MACHINERY WANTED

WANTED—A USED STEAM SIMPLEX
Cooker. State condition and lowest
price in first letter. Address G 242,
c/o The Candy Manufacturer.

WANTED—A CHOCOLATE DIPPING
machine or enrober, must be in A1
condition. Address D222, c/o The
Candy Manufacturer.

WANTED—REVOLVING BATCH
Warmer, Racine Sucker Machine,
Vacuum Cooker for Gas, Peanut and
Popcorn Roaster. The Corneliussup-
ply Co., Inc., 323 23rd St., Newport
News, Va.

WANTED—ONE CHAMPION CANDY
crimper. Fig. 87, Thomas Mills &
Bros. Catalogue. Federal Candy Com-
pany, 806 Platte St., Denver, Colorado.

HELP WANTED

FOREMAN FOR MODERN EQUIPPED
Hard Candy Department to handle
help efficiently, one who can deliver the
goods. A position is now open. Fac-
tory located in Middle West. Kindly
furnish references, age and salary
wanted. Address G243, c/o The Candy
Manufacturer.

CANDY FOREMAN OR SUPERIN-
tendent—one who is willing to work
and assist in developing a department
for a firm of responsibility that sells
direct to jobbers. In answering give
full information regarding yourself
which will be treated confidentially.
We want a man who has a general
knowledge of candy business. Lieben-
thal Bros. & Co., 1430 W. 9th St.,
Cleveland, Ohio.

HELP WANTED—Cont.

WANTED—EXPERIENCED PAN MAN
by old established firm in Vancouver,
B. C., for new department. State ex-
perience with full particulars, where
formerly employed and salary desired.
Address G247, c/o The Candy Manu-
facturer.

WANTED—SUPERINTENDENT WITH
good references who understands
mogul, enrober and continuous cooker
made by National Equipment Co., and
can turn out a high grade line of pall
chocolates, French creams and marsh-
mallow. Machinery installed with a
Schrafft system; marshmallow beater,
steam kettles, refrigerating plant, hot
room. Address G244, c/o The Candy
Manufacturer.

SALESMEN WANTED

SALESMAN WANTED—ONE IN PHIL-
adelphia and nearby, one outside, to
sell high grade line home-made choco-
lates and counter goods. Commission
only. State experience. Brown's Con-
fectionery Co., Philadelphia, Pa.

WANTED—SALESMAN TO SELL
wholesale and retail confectioners
brand new specialty in big demand.
Big demand. Liberal commission.
Pocket samples. Act quick. 513 Fisher
Bldg., Chicago.

CANDY SALESMAN TO SELL TO THE
jobbing trade. We have to offer a
nationally advertised package line of
chocolates, and an exceptional line of
five-pound bulk chocolates. We want
only men experienced selling to the
candy jobbers, and will pay liberal com-
mission to those who qualify. Address
G248, c/o The Candy Manufacturer.

WANTED—LIVE COMMISSION
salesman to have exclusive territory
on new and snappy five-cent bars, in
Middle West territory and Pennsylvania.
Address G245, c/o The Candy Manu-
facturer.

SALESMEN WANTED—MANUFAC-
turer of popular priced assorted
chocolates of quality will increase sales
force in August. Salesmen having fol-
lowing and whose past commissions
have been \$5,000 to \$10,000 per year
will receive first consideration. Ad-
dress F238, c/o The Candy Manu-
facturer.

FOR SALE—MISCELLANEOUS

FOR SALE—YOUR STATE ON FOR-
mula and trade mark for best walnut
candy. Would go partners. A. B.
McCartney, 108 N. Center, Marshall-
town, Iowa.

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REPUTABLE LINES WANTED FOR
Louisiana, Mississippi, Alabama;
Texas. Consolidated Brokerage Co.,
New Orleans, La.

Mention The Candy Manufacturer—it identifies you and helps us

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for Manufacturing Confectioners Exclusively

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Enter my subscription to **The Candy Manufacturer** for a period of ^{FIVE YEARS} ~~ONE YEAR~~ which entitles me to full privileges of your General Service Department, including access to the Reference and Research Bureau and participation in the Open Forum of the magazine. It is understood that a copy of **"The Blue Book," An Annual Directory of American Manufacturers and Importers of Confectioner's Machinery, Factory Equipment, Raw Materials and Supplies** will be sent gratis to 5-year subscribers.

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1922



Curing the graining-off losses in Hard Candies with the *DUPLEX SEAL*

WHAT is the yearly loss in dollars and cents due to spoilage of hard candies that grain off or go bad on the dealers' shelves, or after the customer gets them?

It's enough, at any rate.

Now, it can be *saved*, with the aid of the *DUPLEX SEAL*.

Unlike corks, stoppers, caps and screw tops, the Duplex Seal closes a bottle or jar air-tight. Positively will not creep or work loose.

Candy always fresh, dry and crisp—no matter what the weather.

The simplest seal made. Off

with a quarter turn of the wrist. On again with the same easy motion.

The customer *reseals* the jar *air-tight every time*.

Appollo, Crane, Heide, Page & Shaw, United Retail and a number of others find that the *DUPLEX SEAL* helps their hard candy business.

Look into it. Any leading glass maker can furnish you jars with the *DUPLEX SEAL* finish.

* * *

Interesting information regarding the glass package art, artistic Seal designs, Seal liners to meet special chemical reactions, etc., gladly furnished by our Service Laboratories to manufacturers of hard candies. Our catalog is interesting.

The Duplex Seal

**A PERFECT SEALING & RE-SEALING
CAP FOR GLASS BOTTLES & JARS**

NATIONAL SEAL COMPANY, Inc.,

Executive Offices - 14th Avenue and 36th Street, Brooklyn, N.Y.

Works - BROOKLYN, N.Y.

PORTLAND, ME

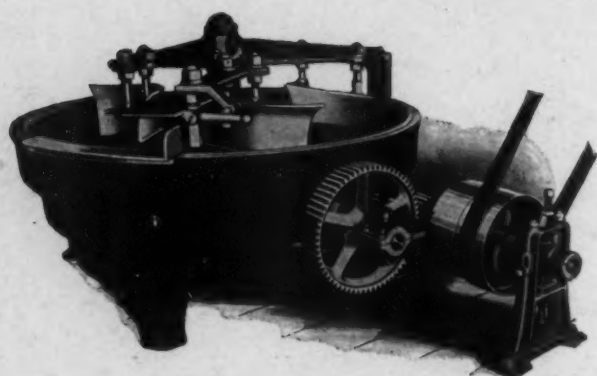
815 Merchants National Bank Bldg., San Francisco, Calif.
Webster Bldg., 327 S. La Salle Street, Chicago, Ill.

Liberty Central Building, St. Louis, Mo.
Newport Bldg., 68 Devonshire St., Boston, Mass.

Duplex Seals manufactured and sold in Canada by The Canadian Bond Crown Co., Ltd., 75 Panet St., Montreal

"You can't beat 'em"

The Ball and Dayton Cream Beaters and Coolers



The Dayton Beater and Cooler

References, detailed description and prices
on request.

Fully protected by patents.

Beware of imitators and infringements.

President Harris says: *"We cannot avoid competition, as it is inevitable at all times, but we can prepare ourselves to meet it, and the equipment for such preparation will not be the apparently easier method of cutting prices, but by attaining more efficiency in each department."*

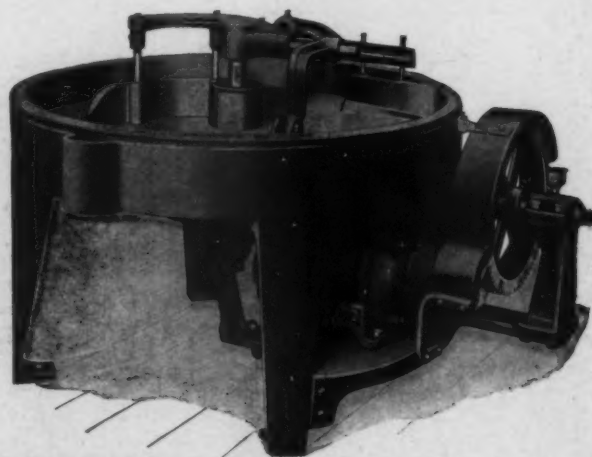
The Ball and Dayton Beaters are proven time-and-money-savers while producing just the kind of work which the finest quality goods demand.

The Answer: Lower costs and more profits.

The Ball Beater and Cooler

The above illustration shows motor attached to machine with gear drive. This can be applied to either our 3, 4 or 5 foot Ball machines, also our 5 foot Dayton machines. Price upon application.

Notice the rigid and substantial construction of the motor attachment.



Send for descriptive literature on entire line giving sizes, capacities, horse-power required, speed, weights, details of construction and net prices.

THE BALL CREAM BEATER CO.
DAYTON, OHIO

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